DSF101 RGJ #3

ChemRisk/Shonka Research Associates, Inc., Document Request Form

(This section to be completed by subcontractor requesting document)

J. Lamb / K-25 CEP
Requestor *Document Center (is requested to provide the following document)*

Date of request 4/28/95 *Expected receipt of document* 5/20/95

Document number none *Date of document* 1/83 - 12/83

Title and author (if document is unnumbered)
Environmental Affairs Monthly Highlights

(This section to be completed by Document Center)

Date request received 4/28/95

Date submitted to ADC — older than 1985

Date submitted to HSA Coordinator 5/1/95

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Date submitted to CICO 5-3-95

Date received from CICO 5-23-95

Date submitted to ChemRisk/Shonka and DOE 5-23-95

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received _____

Signature _____

Unnumbered

COMPILATION OF MONTHLY HIGHLIGHTS HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS

January-December 1983

Compiled by
R. G. Jordan
Environmental Compliance

January-December 1983

Prepared by
Oak Ridge Gaseous Diffusion Plant
Oak Ridge, Tennessee 37831
operated by
Union Carbide Corporation-Nuclear Division
for the U.S. DEPARTMENT OF ENERGY
under Contract W-7405-eng-26

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Ammonia	5	98
ORGDP	None	None	100
Y-12	None	None	100
PGDP	None	None	100

2. DOE Environmental Management Appraisal - ORGDP

The 1982 DOE Environmental Management Appraisal Report for ORGDP was received during the week of January 10, 1983. The environmental program was rated superior and there were no new recommendations.

3. Program to Review ORNL Stack Sampling Systems Begun - ORNL

A consultant from the University of Tennessee has begun an independent evaluation of stack monitoring at ORNL. This evaluation includes review of flow data, physical testing at each stack, and comparison of the results from these tests with DOE and and industry standards.

4. Tennessee Department of Public Health Request for Oak Ridge Sites Groundwater Data - Y-12

The raw laboratory analytical data for approximately 100 samples of groundwater taken from groundwater monitoring wells during the past four years were compiled and, along with similar compilations from ORNL and ORGDP, provided to DOE. The data sheets for each of the 100 Y-12 samples alone contain the results of 21 specific analyses and spectrographic analysis, reporting concentrations of 52 elements.

5. New Sanitary Landfill - Y-12

The Y-12 Plant has been informed by DOE that the Operating Permit for the new sanitary landfill has been received from the State. We are now authorized to begin disposals at this site. The permit does not set dates for beginning operations at the new site nor closing the old site, but the State expects quick action. An action plan for the transition has been developed.

6. Resource Conservation and Recovery Act (RCRA) - Y-12

For the last several months, Environmental Protection Officers (EPO's) from nine Y-12 divisions have been participating in an intensive training program concerning handling and disposal of hazardous waste. The last formal training session for these Environmental Officers was held on Wednesday, January 12. They are currently working with the Environmental Affairs Department to develop a training program for division personnel in order to enhance compliance with RCRA hazardous waste regulations.

7. Regulation of Radioactive Air Emissions by EPA - All Plants

The EPA is preparing to propose an extremely stringent environmental standard for regulating radioactive air emissions from DOE facilities (10 mrem/year to individuals living nearby) under Section 112 of the Clean Air Act. At the request of DOE, each Installation provided cost estimates, where applicable, for reducing radioactive air emissions by 50% and 90% to be used by DOE in negotiations with EPA for a more appropriate, acceptable environmental standard.

INDUSTRIAL HYGIENE

1. Organization Change Announced - ORGDP

An organization change, to become effective March 1, was announced on January 26. In this change W. R. Golliher will assume responsibility as Manager of a new Health, Safety, and Environmental Division, which will include the Industrial Hygiene Department.

2. Walk-Through Survey Program Implemented - ORGDP

A program has been implemented to conduct "walk-through" industrial hygiene surveys in all major facilities on a frequency of every two years. Eight surveys were completed during the month.

3. Future Construction Problems Discussed - Y-12

Industrial Hygiene met with Engineering to discuss health protection requirements for demolition and other extensive work with cooling towers. Due to the presence of toxic materials in the towers, respiratory protection will be required. The requirement for gloves, coveralls, and showers will be evaluated on each individual tower.

4. Filament Winding Area Problems - Y-12

Due to medical problems experienced by a few employees in the filament winding areas, concerns were raised about possible adverse effects of the chemicals and fibers they are using. Industrial Hygiene conducted a literature search on each of the materials used in the operations. A meeting was held with each of the employees to orient them to all the hazardous materials used in the area. Plans for Industrial Hygiene to sample personnel exposure to each of the materials were discussed.

Special attention will be given to those materials containing potential carcinogens. The handling and operating procedures will also be reviewed. At the completion of the survey, another meeting will be held to discuss the results and recommendations.

5. Surplus Machine Tool Survey - PGDP

Industrial Hygiene was asked to determine the PCB concentration in the surface oils of a surplus machine grinder in storage. Preweighed wipe samples were taken and a PCB level ranging from less than 4 ppm to 71 ppm was determined. After an extensive cleanup, additional wipe sample levels ranged from 4-21 ppm. The cleanup was required prior to shipment to the Defense Industrial Plant Equipment Center in Memphis.

6. Oil Cleanup Evaluation - PGDP

Personnel and area air samples were taken by Industrial Hygiene during the cleanup of oil around a transformer in C-337 to determine the potential employee exposure 1,1,1-trichloroethane. As a precautionary measure, the employees were using recommended personal protection equipment. The personnel air sample concentrations ranged from 25 mg/m^3 to 400 mg/m^3 1,1,1-trichloroethane or $\leq$0.2 of the TLV.

The oil was also analyzed for PCB contamination and found to contain 600-700 ppm. The PCB concentration in air was 0.01 mg/m^3, which is 50 times less than the most restrictive TLV for PCB's. The source of the small volume of oil has not been found.

RADIATION SAFETY

1. Muffle Furnace Fire, Room 29, Building 9212 - Y-12

A fire occurred in Muffle Furnace 4103 in Room 29 of Chemical Services Department, Building 9212 at 8:25 a.m. on December 1. The ignited material was filter paper removed from the coolant system of M-Wing, Building 9215. The fire was extinguished with CO_2 fire extinguishers.

Ten 10-minute high volume air samples were taken in Room 29 after the fire. During the time period from 8:40 to 10:20 a.m., airborne activities decreased from 250 to 7 $d/m/m^3$ (PAV - 200 $d/m/m^3$). Personnel were permitted to reenter the work area respiratory protection at 10:15 a.m.

2. Medical Staging Depot Upgraded - Y-12

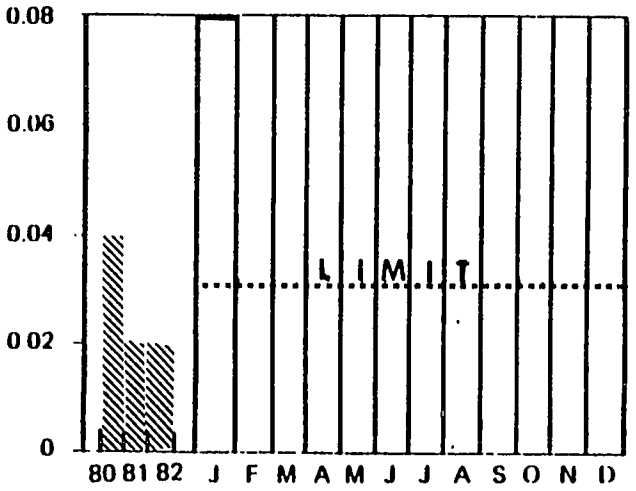
Some changes have been instituted at the medical staging depot which should improve the efficiency with which the Health Physics emergency response team acts in the event of a nuclear criticality. These changes include the installation of additional signs to clarify personnel flow during badge/body checks, and provision of lab coats for the Health Physics staff to enhance their visibility as team members and minimize the probability for radiological contamination. The addition of brown kraft paper for use during drills will simulate the more expensive absorbent paper used for contamination control during a bona fide emergency.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

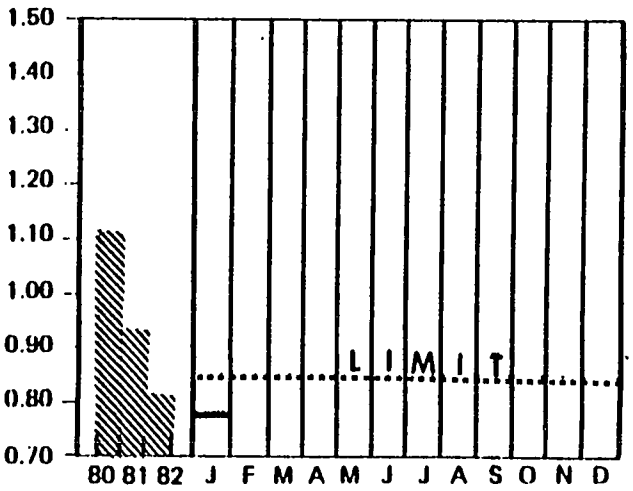
January 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	0	0.00		0	0.00	0	0.00		0	0.00	0	0.00	
ORNL	0	0.00	0	0.00		4	1.29	4	1.29		4	2.96	4	2.96	
OR Y-12	1	0.18	1	0.18		4	0.71	4	0.71		4	1.69	4	1.69	
PGDP	0	0.00	0	0.00		2	1.93	2	1.93		0	0.00	0	0.00	
UCC-ND	1	0.08	1	0.08	0.03	10	0.77	10	0.77	0.85	8	1.45	8	1.45	2.52

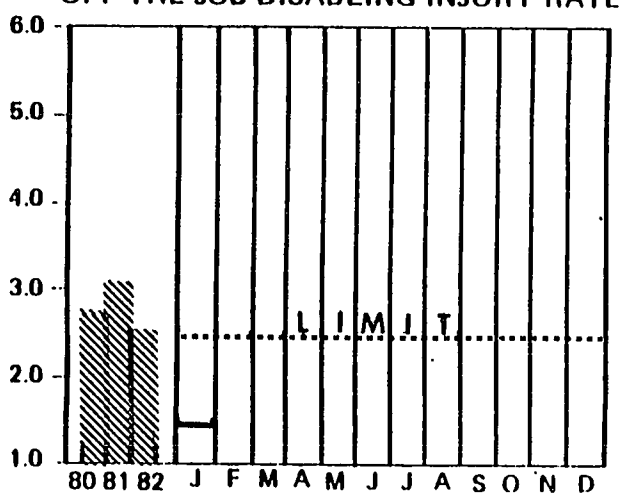
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE



COMMENTS: 'A Lost Workday Case was the result of a slip-fall incident in the Y-12 Plant. The attached summary of Off-The-Job Disabling Injuries reported during 1982 in the Nuclear Division may be useful in calling attention to the number and type of off-the-job accidents that are prevalent.

RGJordan:cm
2/14/83

NUCLEAR DIVISION

1982 Off-The-Job Injury Types and Lost Workdays

	Number of Injuries	Percent of Total	No. of Workdays	Percent of Total
Transportation				
Motor Vehicles	30*	17	1,196	25
Motorcycles	22	12	963	21
Other	3	2	17	
Home				
Falls & Slips	47	26	935	20
Machinery or Tools	8	5	208	4
Other	24**	13	436	9
Public				
Falls & Slips	14	8	230	5
Recreation	14	8	263	6
Sports	12	7	376	8
Other	4	2	69	2
Total	178		4,693	

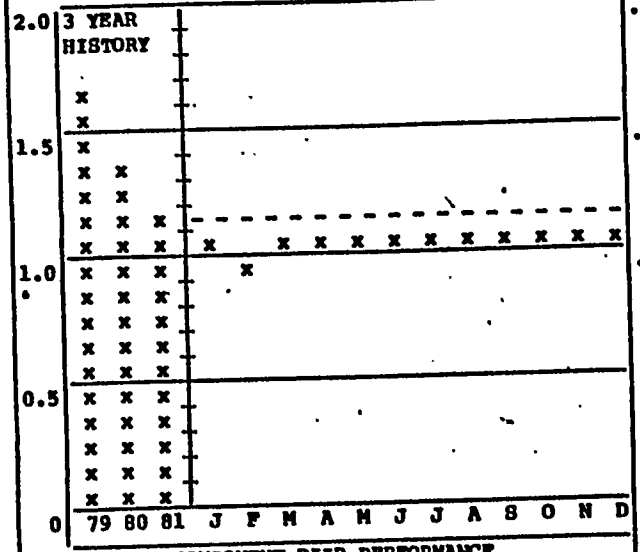
* Includes two fatalities--no lost workdays charged.
**Includes one fatality-- no lost workdays charged.

1/27/83

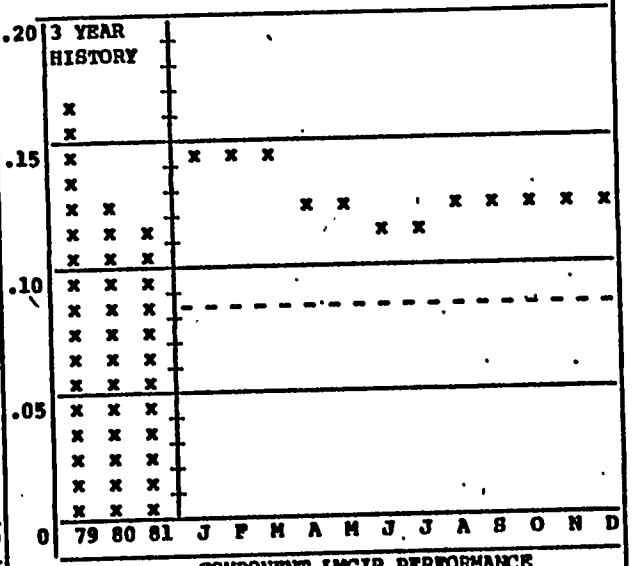
UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

YEAR TO DATE THROUGH DECEMBER 1982

RECORDABLE INJURY-ILLNESS RATE (RIIR)
DOMESTIC - YTD
- - - SHOWS UCC LIMIT



LOST WORKDAY CASE INCIDENCE RATE (LWCIR)
DOMESTIC - YTD
- - - SHOWS UCC LIMIT



COMPONENT RIIR PERFORMANCE

BETTER THAN COMPONENT LIMIT	BASED ON % OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Eng. Plas. & Car. F.	24
Films-Packaging	48
Specialty Chemicals	49
Home & Automotive	57
Polyolefins	68
Solvents & Coatings Materials	69
Ethylene Oxide/Glycol	70
Carbon Products	76
Agricultural Products	80
Electronics	85
Nuclear	85
General Departments	88
U.C. Canada Ltd.	88
Linde	91
Engineering Products	96
Metals	97
Battery Products	99
Silicones & Urethane Inter.	99
POORER THAN COMPONENT LIMIT	
Engineering & Hydrocarbons	103
Medical Products	389

COMPONENT LWCIR PERFORMANCE

BETTER THAN COMPONENT LIMIT	BASED ON % OF COMPONENT LIMIT
Eng. Plas. & Car. F.	0
Ethylene Oxide Derivatives	0
Home & Automotive	0
Polyolefins	40
Nuclear	50
Solvents & Coatings Materials	58
Films-Packaging	73
General Departments	75
Specialty Chemicals	90
Metals	93
POORER THAN COMPONENT LIMIT	
Electronics	113
Engineering Products	136
Carbon Products	146
Linde	150
Battery Products	175
Engineering & Hydrocarbons	186
Ethylene Oxide/Glycol	192
Silicones & Urethane Inter.	200
Agricultural Products	207
U.C. Canada Ltd.	231
Medical Products	959

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	FATALITIES
Medical Products	0	0.00	5.62	
Eth. Oxide Der.	1	0.63	3.75	
General Departments	13	1.02	5.00	
Electronics	37	1.84	3.28	1
Nuclear	178	2.63	2.83	3
Polyolefins	33	3.33	5.00	
Solv. & Coat. Mat.	35	3.47	4.43	1
Eth. Oxide/Glycol	52	4.77	6.00	
TOT. DOMESTIC LIMIT			5.50	
Linde	180	5.80	6.50	1
Eng. Plas. & Car. F	6	5.94	5.00	
Home & Automotive	65	5.98	6.14	
Specialty Chem.	26	6.15	5.00	
Engineering Prod.	63	6.22	6.50	3
Metals	46	6.61	8.00	1
Eng. & Hydro.	95	8.38	3.68	1
Agricultural Products	104	8.45	5.75	1
Sil. & Urethane Inter	81	8.67	8.00	1
U.C. Canada Ltd.	152	8.92	7.50	
Battery Products	211	8.99	8.00	2
Carbon Products	169	9.76	10.00	1
Films-Packaging	121	11.91	10.00	2
TOTAL DOMESTIC	1668	5.59	5.50	18

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	1,629	200
Battery Products	0	40	0
Carbon Products	0	134	290
Electronics	0	0	0
Eng. Plas. & Car. F.	0	0	5
Eng. & Hydro.	0	0	0
Engineering Prod.	0	0	35
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	10,000	10,038	193
Films-Packaging	0	0	0
General Departments	0	11	0
Home & Automotive	0	0	0
Linde	0	168	1,040
Medical Products	0	0	0
Metals	7	70	70
Nuclear	0	176	0
Polyolefins	0	30	200
Sil. & Urethane Inter	0	0	100
Solv. & Coat. Mat.	0	1,822	1,450
Specialty Chem.	0	0	50
U.C. Canada Ltd.	0	764	500
TOTAL DOMESTIC	10,007	14,882	4,083

UNION CARBIDE CORPORATION - SAFETY SUMMARY — DECEMBER 1982

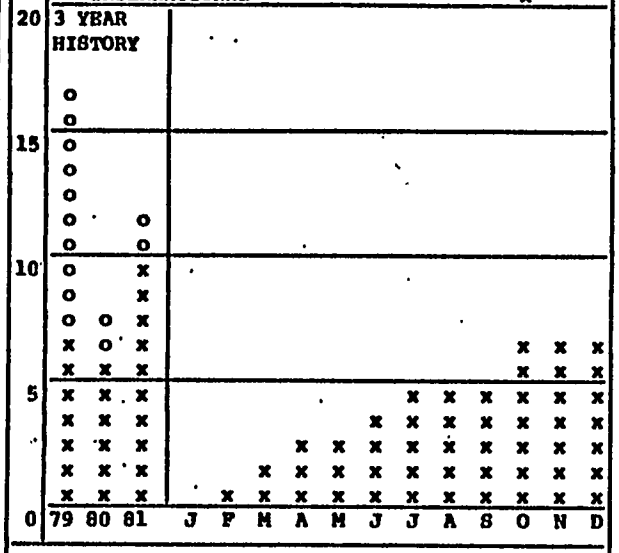
RECORDABLE INJURIES/ILLNESSES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RIIR	YTD NO.	YTD RIIR	YTD LIMIT
Eth. Oxide Der.	0	0.00	0	0.00	0.50
General Departments	0	0.00	5	0.14	0.16
Eng. Plas. & Car. F	0	0.00	1	0.36	1.50
Home & Automotive	1	0.46	16	0.58	1.02
Specialty Chem.	0	0.00	7	0.60	1.22
Polyolefins	3	1.53	19	0.68	1.00
Solv. & Coat. Mat.	1	0.46	20	0.73	1.06
Films-Packaging	3	1.32	21	0.79	1.63
Nuclear	11	0.84	133	0.81	0.95
Eth. Oxide/Glycol	2	0.80	26	0.85	1.22
Electronics	7	1.79	51	0.94	1.11
Battery Products	2	0.46	59	0.99	1.00
Sil. & Urethane In.	1	0.48	25	0.99	1.00
Agricultural Prod.	0	0.00	35	1.02	1.28
Carbon Products	0	0.00	49	1.05	1.38
Eng. & Hydro.	1	0.41	34	1.11	1.08
TOT. DOMESTIC LIMIT					1.20
U.C. Canada Ltd.	4	1.19	59	1.37	1.55
Linde	14	2.15	152	1.80	1.97
Engineering Prod.	1	0.48	57	2.12	2.20
Metals	5	4.64	59	3.19	3.30
Medical Products	0	0.00	4	6.50	1.67
TOTAL DOMESTIC	56	0.93	832	1.06	1.20

LOST WORKDAY CASES - DOMESTIC

COMPONENT	MONTH NO.*	MONTH LWCIR	YTD NO.*	YTD LWCIR	YTD LIMIT	YTD LWIR
Eng. Plas. & Car. F	0	0.00	0	0.00	0.00	0.00
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Home & Automotive	0	0.00	0	0.00	0.07	0.00
Nuclear	0	0.00	4	0.02	0.04	1.09
Polyolefins	0	0.00	1	0.04	0.10	2.33
General Departments	0	0.00	2	0.06	0.08	0.34
Battery Products	0	0.00	4	0.07	0.04	4.14
Solv. & Coat. Mat.	0	0.00	2	0.07	0.12	3.66
Films-Packaging	0	0.00	2	0.08	0.11	7.39
Electronics	1	0.26	5	0.09	0.08	1.14
Specialty Chem.	0	0.00	1	0.09	0.10	5.98
TOT. DOMESTIC LIMIT					0.09	
Eng. & Hydro.	0	0.00	4	0.13	0.07	7.54
Engineering Prod.	0	0.00	4	0.15	0.11	2.20
Carbon Products	0	0.00	9	0.19	0.13	6.80
Sil. & Urethane In.	1	0.48	5	0.20	0.10	3.51
Linde	0	0.00	18	0.21	0.14	5.60
Eth. Oxide/Glycol	1	0.40	7	0.23	0.12	10.25
Metals	1	0.93	5	0.27	0.29	19.79
Agricultural Prod.	0	0.00	10	0.29	0.14	8.03
U.C. Canada Ltd.	1	0.30	16	0.37	0.16	9.73
Medical Products	0	0.00	1	1.63	0.17	17.89
TOTAL DOMESTIC	5	0.08	100	0.13	0.09	4.45

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



RECORDABLE INJURIES/ILLNESSES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RIIR	YTD NO.	YTD RIIR	YTD LIMIT
U.C. Europe	6	0.94	37	0.46	0.46
U.C.Eastern	9	0.46	157	0.66	0.98
UC. Africa Mid-East	0	0.00	18	0.69	0.93
U.C. Pan America	3	0.20	140	0.70	1.21
U.C. So. Africa	8	1.17	163	1.84	1.26
TOTAL INTERNATIONAL	26	0.52	515	0.81	1.02

LOST WORKDAY CASES - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH LWCIR	YTD NO.*	YTD LWCIR	YTD LIMIT	YTD LWIR
U.C. Europe	2	0.31	9(2)	0.11	0.09	5.19
U.C. Pan America	0	0.00	23(2)	0.12	0.11	3.49
U.C. Eastern	3	0.15	45(1)	0.19	0.31	6.19
U.C. So. Africa	0	0.00	28(1)	0.32	0.33	9.54
UC Africa Mid-East	0	0.00	12(1)	0.46	0.57	3.70
TOTAL INTERNATIONAL	5	0.10	117(7)	0.19	0.23	5.58

COMPONENT/CAUSE OF FATALITY

FEB. U.C. Africa/ME-Attack and murder
MAR. U.C. Eastern-Bus accident
APR. U.C. Pan America-Infection from toe injury
JUNE U.C. Europe-Burned in furnace flue
July U.C. Europe-Electrocution
Oct. U.C. Pan America-Fall through roof
Oct. U.C. So. Africa-Crushed in trench collapse

COMMENTS:

*Fatalities shown in ( )

There were no domestic fatalities in 1982. Corporate records back to 1925 indicate that this is the first time this has been achieved. There were 7 fatalities in international area companies in 1982, down from 10 in 1981. The total of 7 fatalities worldwide in 1982, while still unacceptably high, compares favorably with our 1981 total of 12 and our average of 10.4 over the last 5 years.

Total injuries (recordables) for domestic were the best ever and were 19% better than 1981, the previous best performance. The domestic LWCIR failed to improve with the recordable rate. There was one more lost workday case in 1982 than there was in 1981 (100 vs. 99).

Total injuries for international area companies were 21% better than limit for the year. The international LWCIR of 0.19 for the year was 10% better than 1981 performance.

The domestic off-the-job disabling injury rate was 5.59, a new record best performance, and 6% better than 1981, the previous best year.

Domestic accidental property loss in 1982 was $14,882,000 vs. $3,433,000 in 1981. Large losses in incidents at the Institute, Texas City and Taft Plants are responsible for this increase.

U.S. Bureau of Labor Statistics reports indicate that the average lost workday injury rate in the manufacturing industry dropped from 5.2 in 1980 to 4.9 in 1981. Now 4.9 is the rate OSHA will use to determine if a targeted establishment will have a wall-to-wall inspection following review of the OSHA form 200 statistics.

R. VAN MYNEN

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A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Ammonia, BOD	5	97
ORGDP	None	None	100
Y-12	None	None	100
PGDP	Temperature, pH	33	89

2. ENSCO Site Visit - PGDP

A site visit was made to ENSCO's PCB incinerator in Eldorado, Arkansas to determine its acceptability for handling PCB wastes. The facility appeared to be meeting regulatory requirements, and a trip report will be issued covering the site visit.

3. Environmental Data Transmitted To Paducah - ORNL

During the month of February, data from thermoluminescent dosimeters (TLD's) and from the analysis of Paducah vegetation and wildlife samples were transmitted to Paducah.

4. Hazardous Waste Reports Submitted - ORNL

Two reports on hazardous wastes handled at ORNL were completed during February: The 1982 Annual Hazardous Waste Report and the Los Alamos Hazardous Waste Questionnaire. The first report documented a $5000 savings in fees due to the exemption of ORNL's silver recovery process; the second report will be used in a study of hazardous wastes for DOE facilities.

5. Bar Code Label Generation Computerized - ORNL

During February, a program to generate bar code labels for chemicals directly from computer files became operational. This program will be used in both the Hazardous Material Tracking System and ORNL's sampling program.

6. EPA Dose Limits for Public - Y-12

The EPA is under court order to promulgate radionuclide dose standards for the general public by March 29, 1983. In response to this order, EPA has proposed for DOE Installations a standard of 10 millirem/yr to the maximum exposed individual. The standard to which we are now working is 500 millirem/yr to the maximum exposed individual - a DOE standard.

Since EPA had not considered cost impact (had not done a cost-benefit analysis), the DOE asked their contractors to estimate the capital costs for reducing the radionuclide emissions from their respective plants by 50 percent and by 90 percent, to garner facts to rebut the EPA dose proposal. A special engineering team, with only three days to prepare the estimate, provided the following range of capital costs to reduce the radionuclide emissions from only the enriched uranium processing areas of Y-12:

50 percent reduction - $10M to $25M
90 percent reduction - $30M to $75M

It should be noted that at the current 500 millirem standard, it has not been necessary to measure the curies emitted from depleted uranium stacks. At an emission standard of 10 millirem it will not only be necessary to measure the discharges from depleted uranium processing areas, but it may also be necessary to install extensive filtering systems. Capital costs for reducing air effluents from depleted uranium processing areas were not included in the above estimated costs.

INDUSTRIAL HYGIENE

1. Industrial Hygiene Laboratory Accredited - ORGDP

The Industrial Hygiene Analysis Laboratory of ORGDP Process Support Division in conjunction with the Industrial Hygiene Department has received accreditation by the American Industrial Hygiene Association (AIHA). To meet accreditation criteria, a laboratory must have a good QA program, a quality records management system, qualified personnel and management, and pass an on-site inspection by an AIHA committeeman. Samples analyzed by the ORGDP laboratory are now recognized by the AIHA as being comparable nationwide to those from other accreditated laboratories. A certificate of accreditation will be issued and the laboratory will be registered in the AIHA Journal of accreditated facilities.

2. Industrial Hygiene Technician Training - PGDP

An Industrial Hygiene Technician attended a week-long respirator training school in Washington, D.C. in mid February. This will enable us to resume respirator training for Paducah Plant personnel in March. A current record of personnel required to wear respirators is being sent to each division, along with details for scheduling employees for training and fitting sessions.

3. Hearing Conservation Training for Plant Employees - PGDP

Industrial Hygiene conducted four safety meetings on noise and hearing protection to a total of 49 employees.

4. Area Monitoring Program - PGDP

Monitoring for PCB's in the Cascade building is a continuing effort. With wipe samples, some areas of PCB contamination are found up to 700 ppm. We will continue to sample suspected problem areas in an effort to identify the locations. Cleanup of the areas will be coordinated with Material Terminal Management and the Environmental Coordinator.

5. Beryllium Part Processing and Handling Procedures Reviewed by Visitors - Y-12

On February 1, 1983, representatives from the United Kingdom, DOE-Albuquerque, Sandia National Laboratory, and the Navy Department visited the Y-12 Plant to review the processing and handling procedures for a particular part containing beryllium that the US supplies the UK. The UK was alleging that the Be contamination level of the part would exceed their contamination limits. Industrial Hygiene emphasized that whereas smear samples taken directly from the part surface might be higher than the UK limits, the real concern should be for residual surface contamination in the handling areas and the airborne Be levels resulting from handling. Industrial Hygiene demonstrated, through sampling results from previous months, that the Be contamination levels are consistently kept below the UK surface contamination standard.

6. Industrial Hygiene Vacancy Filled - ORNL

The vacancy in the ORNL Industrial Hygiene staff has now been filled. The new industrial hygienist is Kristin Baksa, who reported to work on March 7.

7. Noise Exposure Monitor Interfaced With Computer System - ORNL

The Metrosonics Metrologger (Noise Exposure Monitor) has now been interfaced with the Apple computer system so that individual employee exposure data can be entered directly and stored.

8. Laser Safety Course Held - ORNL

The Laser Safety short course, sponsored by the ORNL Industrial Hygiene Department and held on February 16, was considered a solid success. Among the more than 90 attendees were approximately 80 from within the Nuclear Division, two from ORO, and 11 from outside the DOE organization.

9. Engagement Simulator Evaluated From A Laser Safety Standpoint - ORNL

The ORNL Laser Safety Committee has evaluated the MILES (Multiple Integrated Laser Engagement Simulator), currently being used at ORNL with the M-16 and controller devices. The report containing recommendations will be issued within the near future as a CF Memo.

RADIATION SAFETY

1. Uranium Air Concentrations Sampling Problem - Y-12

The part quenching and press (7500-ton) clearing operations in the Building 9204-4, press area were sampled for uranium air concentrations. Alpha air concentrations were found to be well in excess of the radiation protection standard of 222 $d/m/m^3$, promoting an immediate respiratory requirement for both operations. Laboratory analyses of the filtered samples show that the uranium particles generated in these operations are in the form of tightly bound agglomerates with an average size of 20 microns. This size particle is well above that for respirable particles (5 microns). This would tend to explain why no evidence of internal uranium contamination has been detected through routine urinalyses of the 9204-4 press area people. Both operations are being evaluated to determine the corrective action(s) necessary to achieve adequate contamination containment.

2. Two Sources Replaced - Y-12

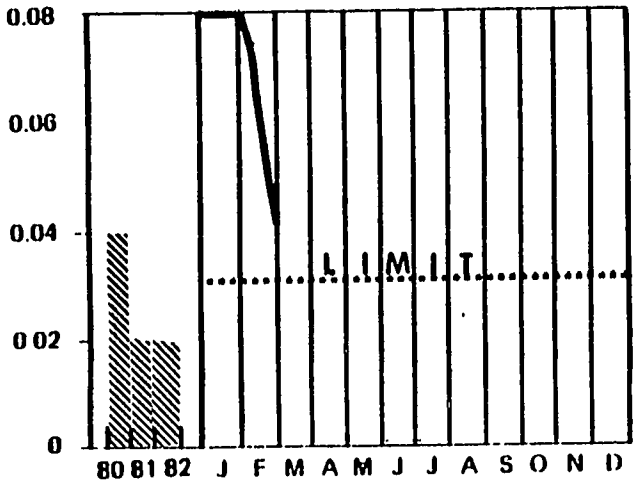
Health Physics and Electrical Maintenance personnel participated in the replacement of two large 60 Co sources (300 Ci and 150 Ci) in radiographic facilities in the Physical Testing area on the east side of Building 9212 (Building 9970). Dose rates from these sources, last replaced in 1971, ranged from about 45 to 90 R/h at 1 meter. The mobile manipulator (Herman) was utilized and performed well. Radiation survey instruments used in the immediate vicinity confirmed that radiation levels never exceeded 2.5 mR/h outside the roped-off area during the brief period the sources were exposed.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

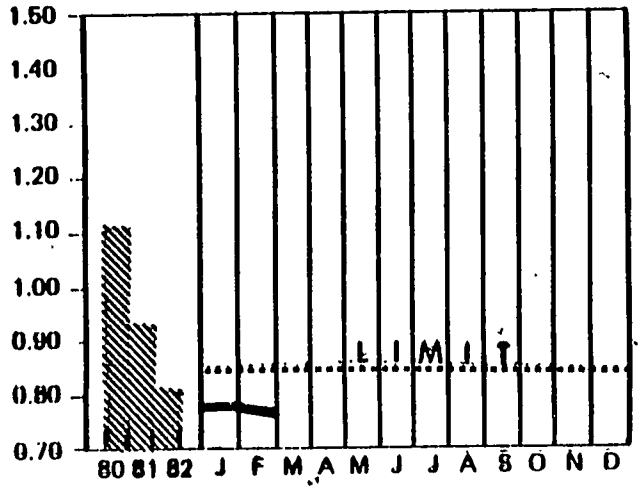
February 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	0	0.00		1	0.32	1	0.16		2	1.47	2	0.74	
ORNL	0	0.00	0	0.00		2	0.65	6	0.98		4	2.98	8	2.97	
OR Y-12	0	0.00	1	0.09		5	0.91	9	0.81		4	1.69	8	1.69	
PGDP	0	0.00	0	0.00		1	1.02	3	1.48		0	0.00	0	0.00	
UCC-ND	0	0.00	1	0.04	0.03	9	0.71	19	0.74	0.85	10	1.82	18	1.63	2.52

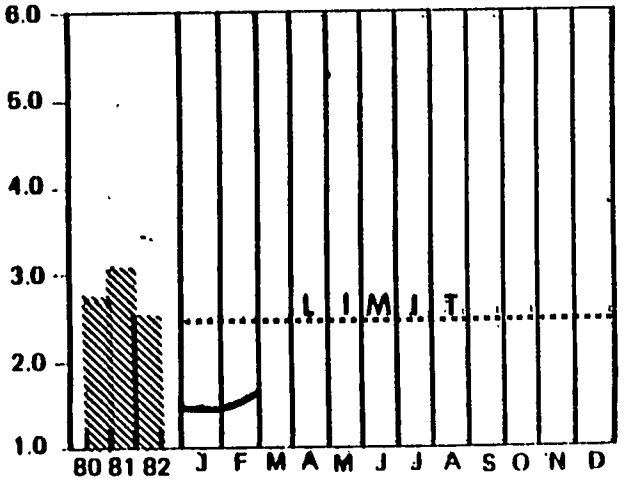
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE

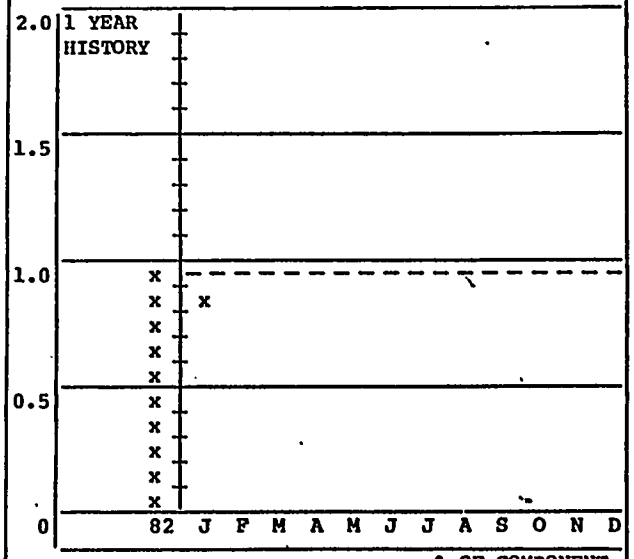


COMMENTS: Both On-The-Job and Off-The-Job Safety indices are good.

RGJordan:cm
3/14/83

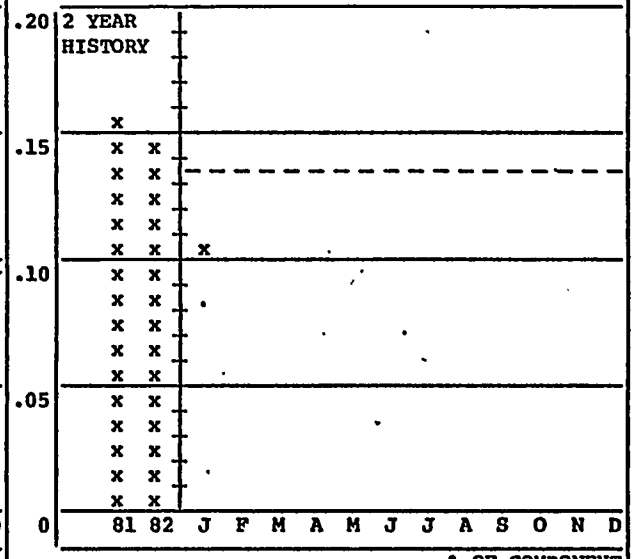
UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY — JANUARY 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Carbon Products	0
Electronics	0
Engineering & Hydrocarbons	0
Ethylene Oxide Derivatives	0
Ethylene Oxide/Glycol	0
Films-Packaging	0
Medical Products	0
Specialty Chemicals	0
Engineering Products	21
U.C. So. Africa	47
U.C. Pan America	57
U.C. Eastern	88
Nuclear	91
Silicones & Urethane Inter.	95
Battery Products	102
Polyolefins	106
U.C. Europe	110
Linde	122
U.C. Africa Mid-East	123
Eng. Plastics & Carbon Fibers	124
Home and Automotive	138
Union Carbide Canada Ltd.	143
Solvents & Coatings Materials	165
Metals	178
Agricultural Products	242
General Departments	473

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Battery Products	0
Carbon Products	0
Electronics	0
Eng. Plastics & Carbon Fibers	0
Engineering & Hydrocarbons	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Ethylene Oxide/Glycol	0
Films-Packaging	0
General Departments	0
Home and Automotive	0
Medical Products	0
Metals	0
Polyolefins	0
Silicones & Urethane Inter.	0
Solvents & Coating Materials	0
Specialty Chemicals	0
Union Carbide Canada Ltd.	0
U.C. Europe	0
U.C. So. Africa	52
U.C. Eastern	62
U.C. Pan America	70
Linde	163
U.C. Africa Mid-East	204
Nuclear	267
Agricultural Products	486

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	FATALITIES
Eth. Oxide Der.	0	0.00	3.20	
Polyolefins	0	0.00	4.16	
Metals	0	0.00	7.00	
Medical Products	0	0.00	8.70	
Agricultural Products	1	0.99	5.90	
Sil. & Urethane Inter	1	1.33	9.00	
Nuclear	8	1.45	2.52	
General Departments	2	1.98	4.61	
Solvents & Coat. Mat.	2	2.00	3.94	
Engineering Prod.	2	2.49	6.00	
Eng. & Hydro.	3	3.27	8.01	
Linde	8	3.37	5.90	
Eth. Oxide/Glycol	3	3.43	6.40	
Electronics	5	3.70	2.67	
Eng. Plas. & Car. F.	1	3.71	5.50	
Carbon Products	4	3.98	9.18	
TOT. DOMESTIC LIMIT			5.40	
Films-Packaging	5	5.93	10.00	
Home & Automotive	7	7.85	6.12	
Battery Products	15	7.95	8.00	
U.C. Canada Ltd.	11	8.42	8.55	
Specialty Chem.	3	8.62	6.00	
TOTAL DOMESTIC	81	3.47	5.40	

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	0	200
Battery Products	0	0	0
Carbon Products	0	0	240
Electronics	0	0	0
Eng. Plas. & Car. F.	0	0	10
Eng. & Hydro.	0	0	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	0	196
Films-Packaging	0	0	100
General Departments	0	0	0
Home & Automotive	0	0	0
Linde	0	0	884
Medical Products	0	0	0
Metals	0	0	65
Nuclear	8	8	0
Polyolefins	0	0	200
Sil. & Urethane Inter	67	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	0	0
U.C. Pan America	0	0	300
U.C. So. Africa	0	0	0
TOTAL UCC	75	75	4363

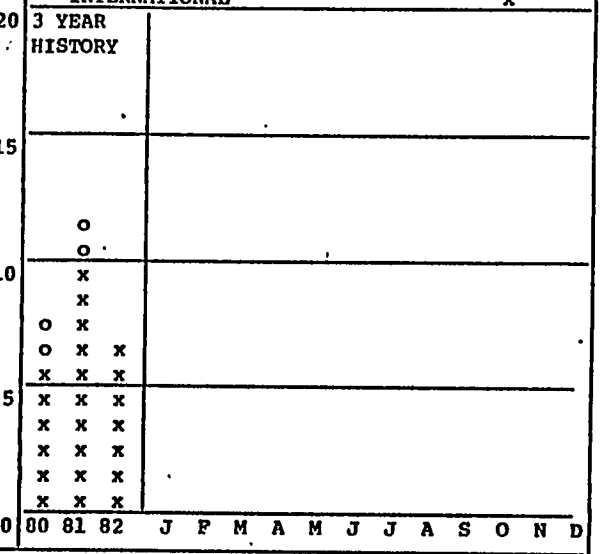
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Eth. Oxide Der.	0	0.00	0	0.00	0.40
Specialty Chem.	0	0.00	0	0.00	0.93
Electronics	0	0.00	0	0.00	0.94
Eth. Oxide/Glycol	0	0.00	0	0.00	0.99
Eng. & Hydro.	0	0.00	0	0.00	1.07
Carbon Products	0	0.00	0	0.00	1.10
Films-Packaging	0	0.00	0	0.00	1.39
Medical Products	0	0.00	0	0.00	4.90
Engineering Prod.	1	0.47	1	0.47	2.24
General Departments	2	0.71	2	0.71	0.15
Polyolefins	2	0.90	2	0.90	0.85
Sil. & Urethane In.	2	0.97	2	0.97	1.02
Battery Products	5	1.02	5	1.02	1.00
TOT. DOMESTIC LIMIT					1.05
Home & Automotive	3	1.32	3	1.32	0.96
Eng. Plas. & Car. F	1	1.36	1	1.36	1.10
Solv. & Coat. Mat.	4	1.52	4	1.52	0.92
U.C. Canada Ltd.	6	1.83	6	1.83	1.28
Linde	14	2.20	14	2.20	1.81
Agricultural Prod.	8	2.71	8	2.71	1.12
Metals	5	4.98	5	4.98	2.80
SUBTOTAL DOMESTIC	53	1.10	53	1.10	
Nuclear	10	0.77	10	0.77	0.85
TOTAL DOMESTIC	63	1.03	63	1.03	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
General Departments	0	0.00	0	0.00	0.07	0.00
Home & Automotive	0	0.00	0	0.00	0.07	0.00
Electronics	0	0.00	0	0.00	0.08	0.00
Eng. & Hydro.	0	0.00	0	0.00	0.08	0.00
Specialty Chem.	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Eng. Plas. & Car. F	0	0.00	0	0.00	0.10	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Carbon Products	0	0.00	0	0.00	0.12	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Solv. & Coat. Mat.	0	0.00	0	0.00	0.12	0.00
Eth. Oxide/Glycol	0	0.00	0	0.00	0.14	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
U.C. Canada Ltd.	0	0.00	0	0.00	0.18	0.00
Metals	0	0.00	0	0.00	0.28	0.00
TOT. DOMESTIC LIMIT					0.09	
Linde	2	0.31	2	0.31	0.19	3.15
Agricultural Prod.	2	0.68	2	0.68	0.14	2.04
SUBTOTAL DOMESTIC	4	0.08	4	0.08		0.54
Nuclear	1	0.08	1	0.08	0.03	0.46
TOTAL DOMESTIC	5	0.08	5	0.08	0.09	0.53

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	6	0.42	6	0.42	0.74
U.C. Europe	3	0.46	3	0.46	0.42
U.C. Eastern	13	0.70	13	0.70	0.80
U.C. So. Africa	6	0.83	6	0.83	1.78
UC. Africa Mid-East	2	0.98	2	0.98	0.80
TOTAL INTERNATIONAL	30	0.62	30	0.62	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	0	0.00	0.06	0.00
U.C. Pan America	1	0.07	1	0.07	0.10	0.21
U.C. So. Africa	1	0.14	1	0.14	0.27	2.90
U.C. Eastern	3	0.16	3	0.16	0.26	3.22
UC Africa Mid-East	2	0.98	2	0.98	0.48	7.84
TOTAL INTERNATIONAL	7	0.14	7	0.14	0.19	2.05

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	93	0.85	93	0.85	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	12	0.11	12	0.11	0.14	1.20

January safety performance was better than limit in every category. The rates for recordable injuries for domestic, international and total UCC were 2%, 29% and 15% better, respectively, than the limits for these groups. Rates for injuries with days away from work were 11%, 26% and 21% better than limits. The rate for domestic off-the-job disabling injuries was 36% better than limit.

The limits selected for 1983, with 1982 for comparison, are as follows:

	Domestic 1983	Domestic 1982	International 1983	International 1982	Total UCC 1983
Recordable Injuries	1.05	1.20	0.87	1.02	1.00
Injuries With Days Away From Work	0.09	0.09	0.19	0.23	0.14
Off-the-Job Disabling Injuries	5.40	5.50	NA	NA	NA

There are several changes on the monthly safety/loss control summary for 1983. Domestic and international figures have been combined in total UCC numbers. International components are now included in the percent of component limit chart as well as the accidental property loss table.

R. VAN MYNEN

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UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	(NH_4), BOD_5, Cl, TSS	19	94
ORGDP	None	1	99.9
Y-12	None	None	100
PGDP	Temperature, pH, BOD_5	27	92

2. SO_2 Limit Relaxation Proposed - PGDP

Proposed changes in Kentucky's regulations incorporating the PGDP's SO_2 limit relaxation were published in the February 1, 1983 Administration Register. Only positive comments were offered during a March 3 public hearing on the proposed change.

3. Marginal Noncompliance From State Inspection - PGDP

The PGDP was cited during an inspection by the Kentucky Division of Air Pollution Control for marginal noncompliance of particulates emissions from the C-405 incinerator and for holes in asbestos waste storage bags. Changes in operating procedures at the incinerator resulted in full compliance with emissions limits on March 22, 1983. By rebagging and by closer coordination between the waste management staff and the line supervision to assure double bagging, full compliance was attained on March 17, 1983.

4. PCB Shipment To ENSCO - PGDP

Three ENSCO trucks carrying PCB contamination waste were manifested to ENSCO on March 21 and 22, 1983. The Waste will be disposed of by ENSCO in the near future.

5. Environmental Data Program Rated "Superior" - ORNL

DOE-ORO's Environmental Protection Branch rated the performance of ORNL's Department of Environmental Management (DEM) to be superior for 1982.

6. Hazardous Waste Shipped Offsite - ORNL

During March, ORNL shipped 162 drums (approximately 45,000 lbs.) of hazardous waste to Chem Waste Management's Emelle, Alabama facility. This shipment provided an opportunity to utilize the Hazardous Waste Tracking System - it generated the 146 page manifest which accompanied the shipment.

7. Asbestos Program Initiated - ORNL

The DEM staff has identified several areas where asbestos insulation exposed to the environment has begun to deteriorate. In conjunction with ORNL's Industrial Hygiene Department (which has identified asbestos problems within buildings), the DEM staff is compiling a comprehensive list of these areas. Work has begun to remove this insulation and to dispose of it properly.

8. Surveillance Around SFMP Facilities Begun - ORNL

The DEM staff has begun to collect data on environmental contamination around sites proposed for decommissioning under the Surplus Facilities Management Program (SFMP). Facilities where work has begun include the 3513 Settling Basin, the Oak Ridge Research Reactor heat exchanger area, and the Homogeneous Reactor Experiment area.

9. DOE/EPA Meeting March 11, 1983, on Airborne Radionuclide Emissions - Y-12

Messrs. Glen Sjoblom, Director, and James Hardin, Assistant Director, EPA Radiation Protection Division, and Ed Patterson, DOE Headquarters, visited the Y-12 Plant to discuss the impact of a proposed new standard. Under the authority of the Clean Air Act, EPA is expected to limit emission of airborne radionuclides to levels which would assure the maximum exposed member of the public would receive less than 10 mr/year. The current DOE limit is 500 mr/year. Presentations were oriented towards pointing out technical uncertainties and supporting cost estimates of $15-25M to reduce emissions by 50 percent from enriched stacks and up to $75M for a 90 percent reduction. EPA personnel indicated the basis of the standard is DOE-wide "best available technology" and not risk to health. All parties agreed that there is no evidence to suggest current emissions from Y-12 pose a risk to the public.

10. Notice of Violation - Y-12

The Tennessee Department of Public Health has sent a Notice of Violation to DOE-ORO pertaining to the Y-12 Plant Centralized Sanitary Landfill in Bear Creek Valley. The notice states that in order to comply with Regulations Governing Solid Waste Processing and Disposal in Tennessee, we must 1) provide a final closure plan for the landfill by March 24, 1983, 2) cease operations in the landfill by April 25, 1983, and 3) start implementation of the approved closure plan by April 25, 1983.

Since closure of the old landfill depends entirely on when we can begin operations in the new landfill, we must step up our activities at the new landfill in order to meet these requirements. Every effort will be made to expedite opening of the new landfill. The State has promised a quick turnaround time for their inspection of the facility prior to operations, but they have not clearly stated what condition the grounds must be in before we start (e.g., landscaping). It is our opinion that the compliance

requirements set forth in the Notice of Violation can be met if the weather conditions remain favorable and if we take advantage of the longer daylight hours and weekends, when and if necessary, to meet these deadlines.

11. Compliance Evaluation Inspection - Y-12

On March 9, DOE received a Notice of Noncompliance resulting from a February 23, 1983 inspection of the Y-12 Plant by personnel of the State of Tennessee, Division of Water Management. According to the State personnel, the inspection, along with documents transmitted by DOE, revealed environmental problems associated with past and present waste disposal practices. According to the State, many of the problems result in pollution of waters of the State. A reply to the allegations by the State is being prepared to be delivered by April 15, 1983.

As a follow-on to the earlier inspection, Barry Sulkin, Division of Water Management, Knoxville Office, and Tony Cothran, Environmental Management and Quality Assurance Administration, Nashville Office, requested and were given tours of the S-3 Ponds, New Hope Pond, sludge basin, burial grounds, and NPDES permit points in the Y-12 valley. State personnel took soil and water samples at the infow and outflow of the oil retention pond in the burial grounds. Y-12 Plant personnel collected duplicate samples for evaluation by the Plant labs.

INDUSTRIAL HYGIENE

1. CO Dosimeter Interfaced With Computer System - ORNL

Interscan carbon monoxide dosimeters, that provide a digital readout through metro-readers, have now been interfaced with the Apple Computer System. Individual employee exposure data can now be entered directly and stored. The computer also automatically analyses the data and generates a sampling report.

2. New Employee On Board - PGDP

Samuel L. Cole received his Q-Clearance and was brought on board. Training is under way for Sam to get him familiar with the different aspects of the Industrial Hygiene function.

3. PCB Sampling - PGDP

Wipe samples were taken from transformers and capacitors in the following process buildings: C-331, C-333, C-335, and C-337, and results were received from the lab. The 34 sample results ranged from 5 to 730,000 ppm PCB, indicating that further investigation was necessary. The results were first discussed with Environmental Control and Material Terminal Management to acknowledge their concerns and to gain input in the development of a long-range sampling program. A letter was written to and discussed with Operations Management personnel to inform them what was found and what precautions should be taken, if any, at this time. No personnel exposure problems were found at this time.

A statistical sampling technique was incorporated to obtain a representative sample from the process buildings. Of the 600 transformers and capacitors in the process

buildings, it was determined that 116 random samples will be taken within the next month and results obtained as soon as possible. These sample results will then be relayed to all departments involved.

4. Cafeteria Inspection - PGDP

A cafeteria inspection was performed for this quarter. No deficiencies were found in the food handling aspect or the food preparation part of the operation. Two deficiencies were found in the safety and food disposal areas. Exit signs are being posted on the doors that are true exits to safety from the area. A concrete pad is being provided for the dumpster for food and waste disposal according to the Kentucky Food Service Code, Section 25, Paragraph F.

RADIATION SAFETY

1. DOE Appraisal of Health Physics Program Completed - Y-12

The Y-12 Health Physics program was judged "Excellent" after its annual DOE appraisal the week of March 14. All prior recommendations were closed except one. No new recommendations were made.

2. Criticality Safety Violation Occurs - Y-12

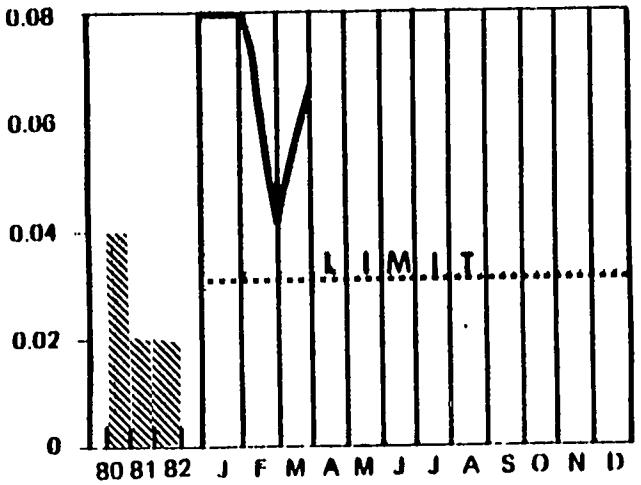
A criticality safety violation, Level 2, occurred in 9212 D-Wing Recovery Area, during the afternoon of March 8, 1983. Development personnel were performing a test to determine amounts of enriched uranium in sanitary waste that would be detectable by NDA analyses. Four 5" diameter x 18" tall tubes were loaded with shredded, compacted, noncontaminated paper and 25, 50, 100, and 200 grams enriched uranium as uranyl nitrate solution at 200 g U/l were injected into the tubes. The Criticality Safety Approval only approved 10 g U/tube with no restriction on separation. An investigating committee has been appointed.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

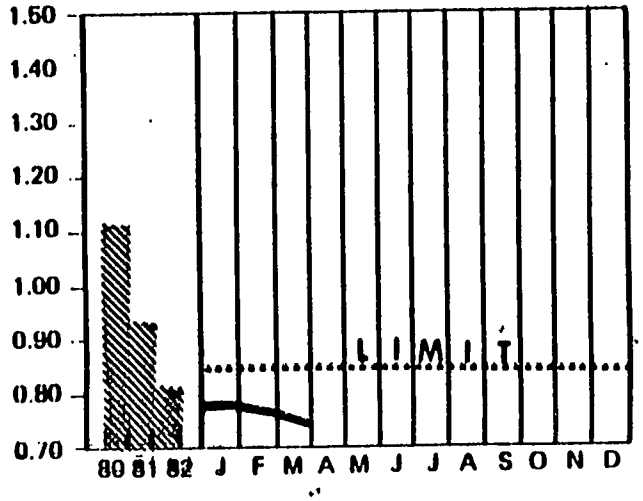
March 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	1	0.27	1	0.10		3	0.81	4	0.40		2	1.47	5	1.23	
ORNL	0	0.00	0	0.00		1	0.27	7	0.71		4	2.97	12	2.97	
OR Y-12	1	0.15	2	0.11		6	0.93	15	0.85		8	3.37	16	2.25	
PGDP	0	0.00	0	0.00		0	0.00	3	0.94		0	0.00	0	0.00	
UCC-ND	2	0.13	3	0.07		10	0.67	29	0.72		14	2.54	33	2.00	

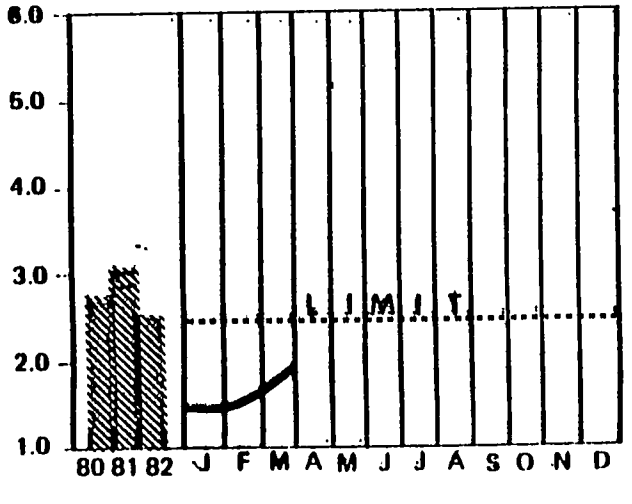
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE

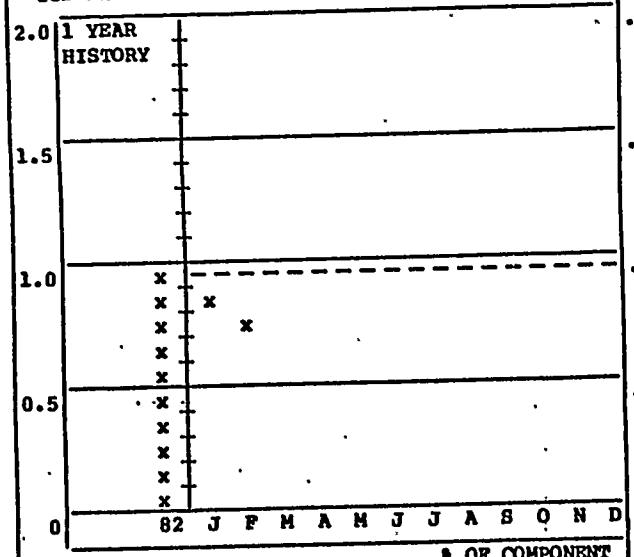


COMMENTS: The occurrence of three Lost Workday Cases during the first quarter of this year suggests that the systems for controlling unsafe work practices and/or conditions need a thorough review and action to correct any missing elements.

RGJordan:cm
4/18/83

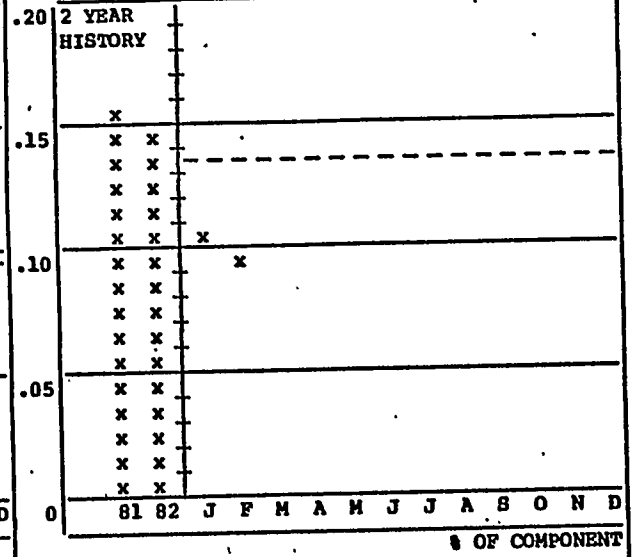
UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Ethylene Oxide/Glycol	0
Medical Products	0
Specialty Chemicals	0
Films-Packaging	35
U.C. So. Africa	43
U.C. Pan America	51
U.C. Eastern	56
Electronics	59
Carbon Products	70
Polyolefins	80
U.C. Canada Ltd.	84
Nuclear	87
Home & Automotive	93
Linde	93
U.C. Africa Mid-East	93
Silicones & Urethane Inter.	96
Battery Products	104
Solvents & Coatings Materials	104
Engineering Products	107
Engineering & Hydrocarbons	134
U.C. Europe	148
Metals	176
Specialty Polymers & Composites	191
Agricultural Products	243
General Departments	360

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Battery Products	0
Carbon Products	0
Electronics	0
Engineering & Hyrocarbons	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Ethylene Oxide/Glycol	0
Films-Packaging	0
General Departments	0
Home and Automotive	0
Medical Products	0
Metals	0
Polyolefins	0
Silicones & Urethane Inter.	0
Specialty Chemicals	0
Specialty Polymers & Composites	0
U.C. Canada Ltd.	0
U.C. Eastern	42
U.C. So. Africa	78
U.C. Pan America	100
Linde	126
Nuclear	133
U.C. Europe	133
U.C. Africa Mid-East	154
Solvents & Coatings Materials	158
Agricultural Products	364

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	DIFR.	LIMIT	FATALITIES
Eth. Oxide Der.	0	0.00	3.20	
Polyolefins	0	0.00	4.16	
Medical Products	0	0.00	8.70	
Electronics	4	1.45	2.67	
Nuclear	18	1.63	2.52	1
Eth. Oxide/Glycol	3	1.72	6.40	
Spec. Poly. & Comp.	1	1.85	5.50	
General Departments	4	1.99	4.61	
Solvents & Coat. Mat.	5	2.51	3.94	
Eng. & Hydro.	5	2.77	8.01	
Agricultural Products	6	2.96	5.90	
Sil. & Urethane Inter	5	3.33	9.00	1
Metals	3	3.95	7.00	
Linde	22	4.69	5.90	
TOT. DOMESTIC LIMIT			5.40	
Carbon Products	12	5.95	9.18	
Engineering Prod.	10	6.22	6.00	
Battery Products	25	6.59	8.00	
Films-Packaging	11	6.60	10.00	
U.C. Canada Ltd.	19	7.29	8.55	
Home & Automotive	15	8.39	6.12	
Specialty Chem.	7	10.04	6.00	
TOTAL DOMESTIC	175	3.76	5.40	2

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	37	37	200
Battery Products	0	0	0
Carbon Products	0	0	240
Electronics	0	0	0
Eng. & Hydro.	10	10	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	0	196
Fims-Packaging	0	0	100
General Departments	0	0	0
Home & Automotive	0	0	0
Linde	150	150	884
Medical Products	0	0	0
Metals	0	0	65
Nuclear	10	18	0
Polyolefins	0	0	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	18	18	0
U.C. Pan America	0	0	300
U.C. So. Africa	25	25	0
TOTAL UCC	250	325	4363

UNION CARBIDE CORPORATION - SAFETY SUMMARY — FEBRUARY 1983

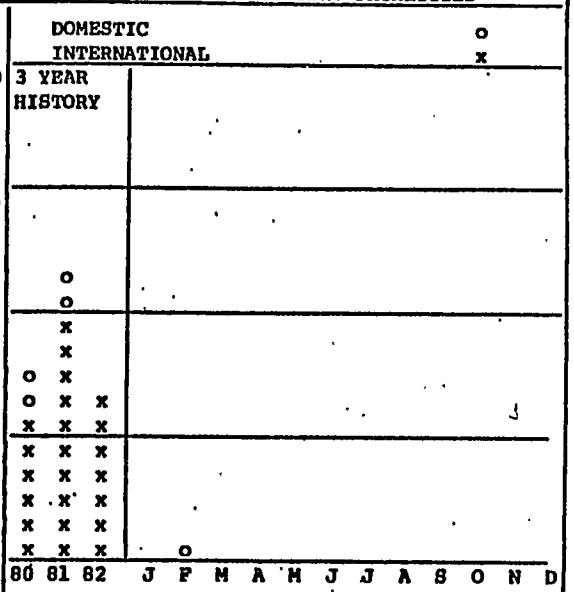
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Eth. Oxide Der.	0	0.00	0	0.00	0.40
Specialty Chem.	0	0.00	0	0.00	0.93
Eth. Oxide/Glycol	0	0.00	0	0.00	0.99
Medical Products	0	0.00	0	0.00	4.90
Films-Packaging	2	0.99	2	0.48	1.39
General Departments	1	0.36	3	0.54	0.15
Electronics	4	1.08	4	0.55	0.94
Polyolefins	1	0.46	3	0.68	0.85
Carbon Products	4	1.56	4	0.77	1.10
Home & Automotive	1	0.45	4	0.89	0.96
Solv. & Coat. Mat.	1	0.38	5	0.96	0.92
Sil. & Urethane In.	2	0.98	4	0.98	1.02
Battery Products	5	1.06	10	1.04	1.00
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	1	0.30	7	1.07	1.28
Eng. & Hydro.	3	1.25	7	1.43	1.07
Linde	7	1.15	21	1.69	1.81
Spec. Poly. & Comp.	2	2.88	3	2.10	1.10
Engineering Prod.	9	4.41	10	2.40	2.24
Agricultural Prod.	8	2.73	16	2.72	1.12
Metals	4	3.93	10	4.94	2.80
SUBTOTAL DOMESTIC	55	1.17	113	1.19	
Nuclear	9	0.71	19	0.74	0.85
TOTAL DOMESTIC	64	1.07	132	1.09	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
General Departments	0	0.00	0	0.00	0.07	0.00
Home & Automotive	0	0.00	0	0.00	0.07	0.00
Electronics	0	0.00	0	0.00	0.08	0.00
Eng. & Hydro.	0	0.00	0	0.00	0.08	0.00
Specialty Chem.	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Spec. Poly. & Comp.	0	0.00	0	0.00	0.10	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Carbon Products	0	0.00	0	0.00	0.12	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Eth. Oxide/Glycol	0	0.00	0	0.00	0.14	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
U.C. Canada Ltd.	0	0.00	0	0.00	0.18	0.00
Metals	0	0.00	0	0.00	0.28	0.00
TOT. DOMESTIC LIMIT					0.09	
Solv. & Coat. Mat.	1(1)	0.38	1(1)	0.19	0.12	0.00
Linde	1	0.16	3	0.24	0.19	2.89
Agricultural Prod.	1	0.34	3	0.51	0.14	1.87
SUBTOTAL DOMESTIC	3(1)	0.06	7(1)	0.07		0.49
Nuclear	0	0.00	1	0.04	0.03	0.98
TOTAL DOMESTIC	3(1)	0.05	8(1)	0.07	0.09	0.60

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	5	0.34	11	0.38	0.74
U.C. Eastern	5	0.26	17	0.45	0.80
U.C. Europe	5	0.78	8	0.62	0.42
UC. Africa Mid-East	1	0.47	3	0.74	0.80
U.C. So. Africa	5	0.68	11	0.76	1.78
TOTAL INTERNATIONAL	21	0.42	50	0.51	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	1	0.16	1	0.08	0.06	0.93
U.C. Pan America	2	0.13	3	0.10	0.10	1.50
U.C. Eastern	0	0.00	4	0.11	0.26	2.54
U.C. So. Africa	2	0.27	3	0.21	0.27	3.95
UC Africa Mid-East	1	0.47	3	0.74	0.48	7.68
TOTAL INTERNATIONAL	6	0.12	14	0.14	0.19	2.44

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	85	0.78	182	0.83	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	9(1)	0.08	22(1)	0.10	0.14	1.42

The Corporation experienced its first fatality this year on February 10 when a pipefitter at the Texas City Plant fell 40 feet from the second level of the converter in the Ethanol Unit.

The recordable injury rate for domestic was 2% above limit for the month and is 4% above limit year-to-date. The domestic rate for injuries with days away from work was 44% below limit for the month and is 22% below limit year-to-date.

In international area companies, the recordable injury rate was 52% below limit for the month and is 41% below limit year-to-date. The international rate for injuries with days away from work was 37% below limit for the month and is 26% below limit year-to-date.

Total UCC rates are as follows: recordable injury rates - 22% below limit for the month and 17% below limit year-to-date; and, rates for injuries with days away from work - 43% below limit for the month and 29% below limit year-to-date.

The year-to-date off-the-job disabling injury rate is 36% below limit.

C. E. ELEY

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher/J. D. Sherrod

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

G. B. Marrow
J. R. Merriman
M. E. Mitchell
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Ammonia, BOD ,TSS	16	95
ORGDP	None		100
Y-12	Zn	1	80
PGDP	Temp., pH, Oil & Grease	7	98

2. Hazardous Waste Disposal Facilities Inspected - ORNL

An inspection team, consisting of B. M. Eisenhower (ORNL), J. M. Kennerly (ORGDP), and T. A. Perry, inspected two hazardous waste disposal facilities run by Rollins Environmental Corporation: The Deer Park PCB incinerator facility and the Baton Rouge facility consisting of a non-PCB incinerator and a landfill. A trip report is being prepared.

3. First Phase of Soil Sampling Program Completed For Surplus Facilities Management Program - ORNL

Geotek Corporation completed deep soil coring at 37 sites in April. A total of 415 ft of soil cores were taken; these cores are being analyzed for radioactivity and hazardous materials. The data from these analyses will be used in studies to determine the best methods for decontaminating and decommissioning these sites.

4. Major Asbestos Tear-off Completed - ORNL

The removal of asbestos from outdoor piping in the 7600 area was completed in April. A total of 820 linear feet of insulation was removed and disposed of in this operation.

5. Response to EPA Comments On The Hazardous Waste Storage Facility Completed - ORNL

The ORNL response to EPA's second round of comments on the RCRA Part B application to operate the Hazardous Waste Storage Facility was transmitted to DOE in April.

6. Tc-99 Release to Poplar Creek - ORGDP

On April 12, 1983, it was determined through routine analysis of monthly composite samples, that the Tc-99 discharge from the K-1407-B holding pond to Poplar Creek during March 1983, exceeded ORGDP administrative reporting limits. The measured Tc-99 concentrations were 350,000 pico Ci/L and the reporting limit is 50,000 pico Ci/L. A

subsequent grab sample collected on April 12, 1983, revealed that the Tc-99 concentration had returned to a more normal level of 2,700 pico Ci/L.

Although in excess of the reporting limit, the discharge did not result in any significant on-site or off-site radiological impact.

The exact cause of this atypical discharge has not yet been determined but is believed to be related to equipment decontamination work routinely performed in the K-1420 building. An investigation committee has been appointed to determine the probable cause of of the release and to make recommendations relative to measures to preclude similar releases in the future.

7. Proposed NESHAP Regulation - ORGDP

On April 15, 1983, formal comments on the proposed EPA regulation of DOE facility emissions of airborne radionuclides were transferred to DOE. This regulation was officially proposed by EPA in the April 6, 1983 Federal Register. In general, it would restrict airborne radionuclide emissions to levels that would result in a radiological dose to the maximum-exposed, off-site individual of no more than 10 mrem/yr to the whole body or 30 mrem/yr to any specific organ.

The ORGDP should not have any problems in meeting this proposed regulation for existing operations, higher power level diffusion plant operations, or future operations associated with the AVLIS development effort. Problems would almost certainly be encountered with TC-99 releases if significant quantities of reactor return uranium were to be fed to the diffusion plant. Process Support personnel will evaluate methods for reducing such Tc-99 emissions to an acceptable level.

8. Mercury Cleanup Started for Building 81-10 - Y-12

The mercury cleanup of Building 81-10 started with the repackaging of the mercury sludges that were stored in damaged drums and cleaning of the concrete pad beneath the furnace.

9. Visit by Tennessee Division of Solid Waste Management - Y-12

Mark Burris and Rick Brown from the State Department of Public Health, Solid Waste Management Branch, Knoxville Office, performed their annual RCRA inspection of Kerr Hollow Quarry. Conditions were found to be satisfactory. They performed an informal inspection of the new sanitary landfill site and the current sanitary landfill. They appeared to be satisfied with progress to date on preparation of the new site. They looked at the oil retention pond in the burial grounds and trench 14 where oil seeps are originating. The problem with water quality was reviewed and possible corrective actions discussed. The State personnel made no substantive comments concerning the oil retention pond or the seeps.

10. ORO Radioactive Waste Coordnator's Meeting - Y-12

Environmental Affairs personnel attended the ORO Radioactive Waste Coordinators Meeting held at the Museum of Atomic Energy March 29 and 30. A discussion of the most recent draft of DOE Order 5820 (Low Level Radioactive Waste Management) by the author indicated there will be significant flexibility for implementation by each of the DOE Field offices.

11. PCB's In Gasket Materials - PGDP

In response to findings at GAT, gasket materials in PGDP cascade building ventilation ducts were analyzed for PCB's. Findings indicate that gasket materials in all four process buildings contain PCB's in percent levels.

12. Chemical Spill - PGDP

During spring housekeeping in a janitorial area, 10 gallons of concentrated drain deodorizer were poured into a storm drain by an employee who was not aware of the potential consequences of the action. The discharge emptied into the east-west sewer resulting in a fish kill in Big Bayou Creek. Appropriate DOE, UCC-ND, and State officials were notified of the incident. The environmental impact was temporary and limited to a short section of Big Bayou Creek.

INDUSTRIAL HYGIENE

1. Legionnaires Disease Task Force Committee Meeting Participation - Y-12

A Y-12 Industrial Hygiene representative participated on a Task Force Committee to establish guidelines for protection against and control of Legionnaires Disease Bacteria in cooling systems for DOE facilities. The committee addressed three main areas of concern: risk assessment, design, and maintenance. The guidelines are currently being written and will be sent to the committee for comment. The final draft will be sent to Don Ross, DOE Washington, for approval. After approval, the guidelines will be distributed for implementation at each facility.

2. Annual DOE Appraisal of Industrial Hygiene Completed - Y-12

The Health Protection Branch of DOE completed their annual appraisal of the Y-12 Industrial Hygiene Department. All the program elements of Industrial Hygiene are covered over a three-year period; this appraisal concluded the third year. An "Excellent" rating was received.

3. Survey Of Airborne Level Problems In Fogbank Removal Area - Y-12

Industrial Hygiene conducted a sampling survey of airborne levels of fogbank generated while removing spent fogbank from its container for reprocessing. Sampling results showed the breathing zone levels to be from 2 to 10 times the threshold limit value; however, personal protective equipment, including respiratory protection, was worn. A meeting was held with representatives from Metal Prep, Fabrication, Engineering, and Industrial Hygiene to discuss altering the present container design and revising the removal procedure to correct exposure and other design problems.

4. Industrial Hygiene Staff Training - PGDP

Sam Cole attended an American Industrial Hygiene Association approved training course in general Industrial Hygiene. This is the final link in giving the staff the minimum level of training to meet the DOE recommendation made following the December 1982 Appraisal.

5. Lunchroom Surveys Completed - PGDP

An OSHA type survey was made of the lunchrooms in C-710 and C-746. The facilities met the standards; however, the C-746 lunchroom was minimally acceptable.

6. Respirator Training Program - PGDP

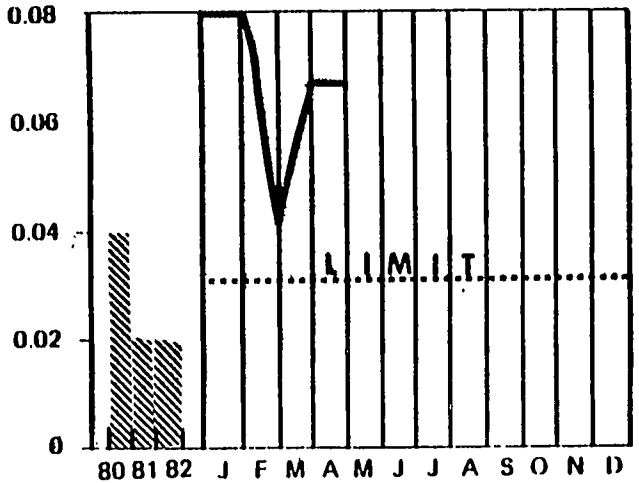
After several months interruption, Industrial Hygiene has resumed respirator training. During April, 21 people were trained and fitted. Training at a rate of 100 per month is expected for the rest of the year. Each Division will be notified when to schedule their personnel.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

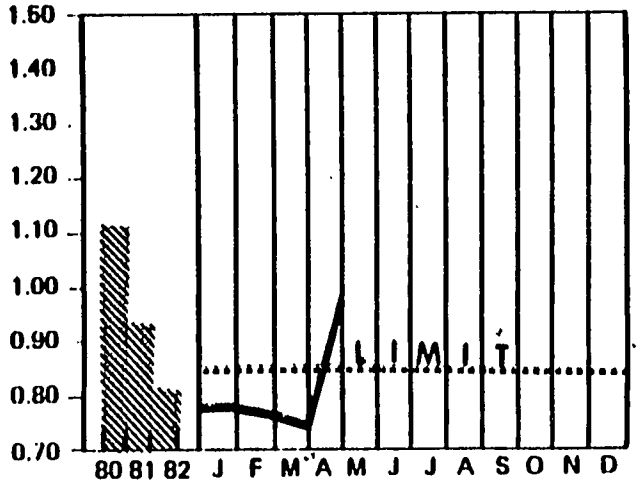
April 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	1	0.08		1	0.31	5	0.38		3	2.22	8	1.47	
ORNL	0	0.00	0	0.00		4	1.27	11	0.85		7	5.19	19	3.52	
OR Y-12	1	0.18	3	0.13		13	2.31	28	1.20		3	1.26	19	2.00	
PGDP	0	0.00	0	0.00		2	1.99	5	1.19		0	0.00	0	0.00	
UCC-ND	1	0.08	4	0.07	0.03	20	1.54	49	0.92		13	2.36	46	2.09	2.52

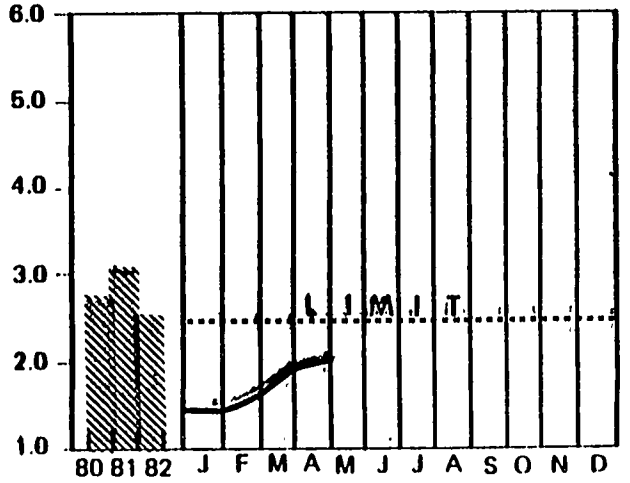
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE



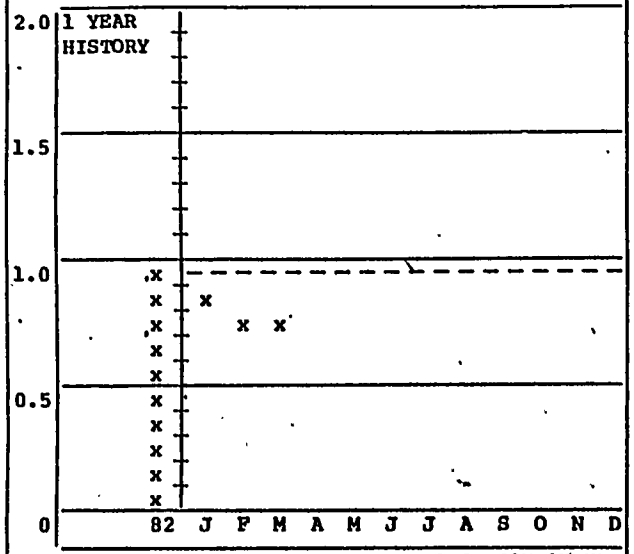
COMMENTS: The twenty Recordable Injuries/Illnesses experienced during the month result in a year to date record exceeding our control limit. The Lost Workday Case Incidence Rate continues above the control limit. The attention of all employees and rededication to safe work practices must be obtained if we are to meet our 1983 goals!

RGJordan:cm
5/19/83

UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

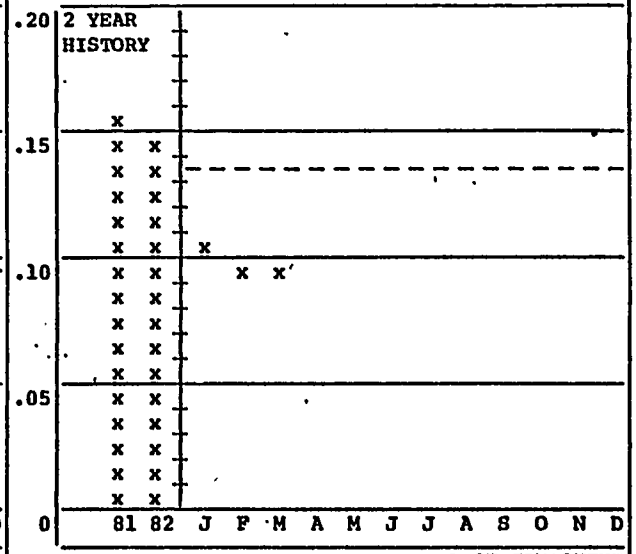
MARCH 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Specialty Chemicals	0
Ethylene Oxide/Glycol	14
U.C. Southern Africa	44
Polyolefins	52
U.C. Pan America	54
U.C. Eastern	58
Films-Packaging	65
Carbon Products	67
Engineering Products	70
Electronics	81
U.C. Africa & Middle Easts	81
U.C. Canada, Limited	84
Nuclear	85
Linde	87
Home & Automotive Products	90
Solvents & Coatings Materials	92
Silicones & Urethane Intermediates	93
Battery Products	94
Engineering & Hydrocarbons	141
U.C. Europe	145
Metals	169
Agricultural Products	194
Specialty Polymers & Composites	207
Ethylene Oxide Derivatives	245
General Departments	320

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Battery Products	0
Carbon Products	0
Electronics	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Films-Packaging	0
Home & Automotive Products	0
Medical Products	0
Metals	0
Polyolefins	0
Silicones & Urethane Intermediates	0
Specialty Chemicals	0
U.C. Canada, Limited	0
U.C. Eastern	42
U.C. Europe	83
U.C. Southern Africa	85
Ethylene Oxide/Glycol	100
Solvents & Coating Materials	100
U.C. Africa & Middle East	102
U.C. Pan America	110
Linde	111
General Departments	171
Engineering & Hydrocarbons	175
Nuclear	233
Agricultural Products	243
Specialty Polymers & Composites	460

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	LIMIT	FATALITIES
Eth. Oxide Der.	0	0.00	3.20	
Medical Products	0	0.00	8.70	
Polyolefins	1	0.53	4.16	
Electronics	4	0.94	2.67	
Spec. Poly. & Comp.	1	1.23	5.50	
General Departments	4	1.33	4.61	
Nuclear	33	2.00	2.52	2
Agricultural Products	8	2.63	5.90	
Solvents & Coat. Mat.	9	3.02	3.94	
Linde	32	4.53	5.90	
Battery Products	26	4.53	8.00	1
Eth. Oxide/Glycol	12	4.60	6.40	
Eng. & Hydro.	13	4.85	8.01	
Sil. & Urethane Inter	12	5.36	9.00	1
TOT. DOMESTIC LIMIT			5.40	
Carbon Products	17	5.60	9.18	
Metals	7	6.10	7.00	
Films-Packaging	16	6.43	10.00	
Engineering Prod.	16	6.64	6.00	
U.C. Canada Ltd.	29	7.43	8.55	
Home & Automotive	20	7.54	6.12	
Specialty Chem.	9	8.61	6.00	
TOTAL DOMESTIC	269	3.84	5.40	4

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	50	87	200
Battery Products	0	0	0
Carbon Products	25	25	240
Electronics	0	0	0
Eng. & Hydro.	8	18	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	0	196
Films-Packaging	0	0	100
General Departments	75	75	0
Home & Automotive	0	0	0
Linde	20	170	884
Medical Products	0	0	0
Metals	0	0	65
Nuclear	0	18	0
Polyolefins	0	0	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	18	0
U.C. Pan America	0	0	300
U.C. So. Africa	58	.83	0
TOTAL UCC	236	561	4363

UNION CARBIDE CORPORATION - SAFETY SUMMARY — MARCH 1983

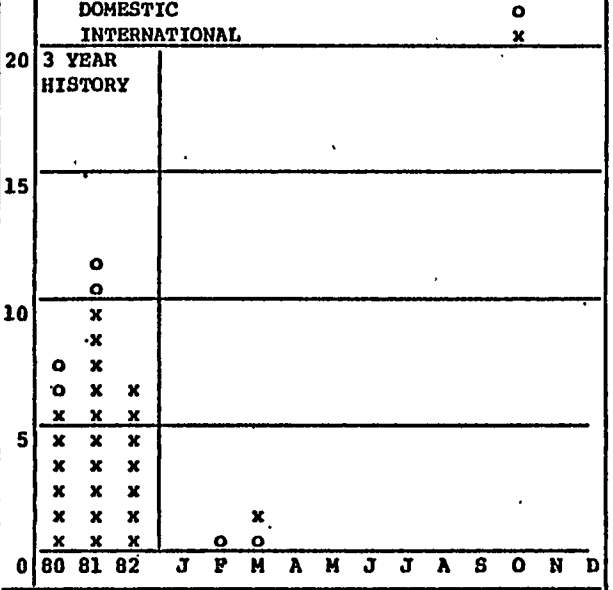
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Specialty Chemicals	0	0.00	0	0.00	0.93
Medical Products	0	0.00	0	0.00	4.90
Eth. Oxide/Glycol	1	0.41	1	0.14	0.99
Polyolefins	0	0.00	3	0.44	0.85
General Departments	1	0.36	4	0.48	0.15
Carbon Products	3	1.04	6	0.74	1.10
Electronics	5	1.08	9	0.76	0.94
Solv. & Coat. Mat.	2	0.69	7	0.85	0.92
Home & Automotive	2	0.81	6	0.86	0.96
Films-Packaging	4	1.63	6	0.91	1.39
Battery Products	5	0.93	15	0.94	1.00
Sil. & Urethane In.	1	0.48	6	0.95	1.02
Eth. Oxide Der.	1	2.95	1	0.98	0.40
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	4	1.10	11	1.08	1.28
Eng. & Hydro.	4	1.66	11	1.51	1.07
Engineering Prod.	0	0.00	10	1.57	2.24
Linde	9	1.38	30	1.58	1.81
Agricultural Prod.	3	1.04	19	2.17	1.12
Spec. Poly. & Comp.	2	2.63	5	2.28	1.10
Metals	3	2.62	15	4.74	2.80
SUBTOTAL DOMESTIC	50	0.97	165	1.12	
Nuclear	10	0.67	29	0.72	0.85
TOTAL DOMESTIC	60	0.90	194	1.03	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
Home & Automotive	0	0.00	0	0.00	0.07	0.00
Electronics	0	0.00	0	0.00	0.08	0.00
Specialty Chemicals	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Carbon Products	0	0.00	0	0.00	0.12	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
U.C. Canada Ltd.	0	0.00	0	0.00	0.18	0.00
Metals	0	0.00	0	0.00	0.28	0.00
TOT. DOMESTIC LIMIT					0.09	
General Departments	1	0.36	1	0.12	0.07	1.32
Solv. & Coat. Mat.	0	0.00	1(1)	0.12	0.12	0.00
Eng. & Hydro.	1	0.41	1	0.14	0.08	2.88
Eth. Oxide/Glycol	1	0.41	1	0.14	0.14	0.68
Linde	1	0.15	4	0.21	0.19	2.48
Agricultural Prod.	0	0.00	3	0.34	0.14	3.88
Spec. Poly. & Comp.	1	1.31	1	0.46	0.10	5.03
SUBTOTAL DOMESTIC	5	0.10	12(1)	0.08		0.87
Nuclear	2	0.13	3	0.07	0.03	1.38
TOTAL DOMESTIC	7	0.11	15(1)	0.08	0.09	0.98

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet
MAR. U.C. Southern Africa - Caught between elevator and elevator shaft

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	7	0.46	18	0.40	0.74
U.C. Eastern	9	0.48	26	0.46	0.80
U.C. Europe	4	0.59	12	0.61	0.42
UC. Africa Mid-East	1	0.48	4	0.65	0.80
U.C. So. Africa	6	0.84	17	0.79	1.78
TOTAL INTERNATIONAL	27	0.54	77	0.52	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	1	0.05	0.06	1.77
U.C. Pan America	2	0.13	5	0.11	0.10	2.06
U.C. Eastern	2	0.11	6	0.11	0.26	2.48
U.C. So. Africa	2(1)	0.28	5(1)	0.23	0.27	3.90
UC Africa Mid-East	0	0.00	3	0.49	0.48	5.05
TOTAL INTERNATIONAL	6(1)	0.12	20(1)	0.13	0.19	2.57

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	87	0.75	271	0.80	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	13(1)	0.11	35(2)	0.10	0.14	1.68

The Corporation experienced its second fatality of the year when an employee of Zimbabwe Mining and Smelting Company was caught between an elevator and the elevator shaft.

Safety performance in all other categories is better than last year at this time and is lower than the limits for 1983. This applies to domestic, international, and total UCC.

Although there were seven injuries with days away from work in the domestic operations this month, the year-to-date number and rate is only about half that of last year at this time. The off-the-job injury rate has also been reduced by 29 percent over last year's first quarter figures.

C. E. ELEY

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
H. E. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher/J. D. Sherrod

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C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

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M. W. Knazovich

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M. E. Mitchell
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J. M. Napier

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J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Worrell
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Ammonia, BOD_5, TSS, TRC	12	94
ORGDP	COD	1	99
Y-12	Zn	2	98
PGDP	None	0	100

2. Meteorological Tower Data Reduction Move to PDP-10 - ORNL

In an effort to speed up the development of reports, the DEM staff has moved the data reduction programs for its meteorological tower system to a mainframe computer, the PDP-10. This movement has resulted in two other improvements: a back-up storage location for the system software and greater access to the data by other users.

3. Use of DARTAB Begins - ORNL

The DEM has begun to use the EPA computer code DARTAB to assess the environmental effects of Oak Ridge facilities airborne releases. Initial runs of the program have been compared with similar runs made by the EPA and with runs made with the AIRDOS computer code; there was good agreement among the program outputs.

4. PCB Data Base Established - ORNL

A computerized data base has been established to follow the use and disposal of PCB's at ORNL. The data base, which is connected to the Hazardous Materials Tracking System, documents the locations of PCB's around the plant, keeps track of inspections, and follows the PCB's to their ultimate disposal.

5. Drainage Survey Work Begun - ORNL

Lockwood-Greene, a local architect-engineer, has begun the work of updating all drainage drawings for the ORNL facilities located at Y-12. This work will include the tracing of all drainlines, the documentation of any cross-connections and the revisions of drainage system drawings to show as built conditions.

6. Trip To Chemical Waste Management - ORGDP

Members of the Environmental Management Department of ORGDP and ORNL visited Chemical Waste Management, Inc. on May 19, 1983, to reevaluate the facilities ability to manage

hazardous waste in the wake of recent press releases reporting troubles. It was determined that while there had been several concerns with regulatory compliance, they have corrected deficiencies and are back on the right track for managing waste. The group concensus was to continue doing business with Chemical Waste Management, Inc.

7. Fish Kill - ORGDP

On May 12, 1983, a fish kill was observed in the small pond located in front of the ORGDP just north of Highway 58. The cause of the fish kill, which included about 100 bluegill and small shad, was believed to be depleted oxygen and/or high chlorine content.

The pond in which the fish kill occurred had previously been drained to facilitate repair of a broken sanitary water line that runs through the pond. As the pond water volume was reduced, fish were removed and placed in the pond across the highway; when the incident occurred, the vast majority of the fish had been removed.

The exact cause of the fish kill is not known, but it is believed to be a result of high chlorine content that resulted from a leak in the sanitary water line during the first attempt to place it back in service and/or a low content of oxygen due to the low volume of stagnant water in the pond.

The incident was reported to DOE who subsequently reported it to the State Water Quality Department. The State felt that this incident was a fish kill in a private pond and, as such, did not require their involvement.

8. Hydrology Study Contract--Prebid Meeting - Y-12

A prebid conference for a groundwater monitoring contract was held on April 27, 1983. Representatives from UCC-ND Legal, Engineering, Dames and Moore, Geraghty and Miller, Soil and Materials Engineers, Inc., and Geotek were given a review of the project description and a tour of the three study areas. This contract covers groundwater monitoring of major Y-12 waste disposal areas.

9. Memorandum of Understanding - Y-12

A Memorandum of Understanding between DOE, EPA, and the State of Tennessee concerning "Compliance of Pollution Control Standards at the Department of Energy Y-12 Plant" has been signed.

The first commitment required by this document was submitted to DOE-ORO May 31, 1983. The preliminary report contained the following information: 1) Maps of all discharge pipes to the industrial ditch, 2) a description of all Y-12 effluent discharges to the industrial ditch, and 3) interim plans for treatment and/or elimination of waste streams.

10. Corporate Audit - PGDP

Representatives of UCC corporate environmental, health protection, and legal groups visited the PGDP to review previously supplied procedures, policies, historical data, and current concerns in the areas of environmental and health protection. The visit and information review will provide the corporation a data base should it be needed after the UCC-DOE operating contract is terminated. The visitors seemed pleased with the well organized information package and the long-term effectiveness of the plant programs.

INDUSTRIAL HYGIENE

1. Increased Emphasis on Engineering Controls for Noise Exposures - Y-12

OSHA has issued a revised field guide on enforcement of the noise standard and is placing more emphasis on engineering controls. According to the guide, a citation for a violation will be issued when an employee's noise exposure exceeds the limits specified in the Standard, whether or not the employee was wearing hearing protection, if feasible engineering and/or administrative controls were not used. The U.S. Supreme Court interpreted "feasible" as "capable of being done" or "achievable."

2. Lead-In-Air Samples - PGDP

Lead-in-air samples were taken at C-746 during the melting of scrap lead for ingot pouring. A field instrument showed the potential exposure range of 0.07 to 1.0 mg/m^3 with an average of 0.3 mg/m^3. The lead-in-air TLV is 0.15 mg/m^3. The use of respirators in the general area was recommended, and they were used during the rest of the operation. High volume samples were also taken during the operation with the results ranging from 0.4 to 0.94 mg/m^3 with an average of 0.49 mg/m^3.

3. Clarifier Tank Cleaning - PGDP

The clarifier tank in the C-600 building was cleaned to remove the scale deposit on the tank walls using a silicon-free blasting material. Several personnel and area air samples were taken for potential exposure of personnel to silica and dust. Personnel protection included a forced air hood, gloves, boots, and coveralls. Results of sampling are not available at this time.

4. American Industrial Hygiene Association Conference Attendance - PGDP

A member of the Industrial Hygiene staff attended the American Industrial Hygiene Association National Conference in Philadelphia.

5. Respirator Testing - PGDP

Industrial Hygiene conducted respirator facial fit testing and training for 130 employees during the month of May.

RADIATION SAFETY

1. Y-12 Plant Criticality Safety Consultant Review -Y-12

Criticality Safety consultants John Morfitt, Thomas Pigford, Dave Smith, and Bill Stratton spent April 26-28, 1983, performing a review of the Y-12 Plant Criticality Safety Program. They gave special attention to safety program impacts like: facility modifications, planned facility refurbishments, M-Wing coolant evaluations, Plant personnel status, safety documentation, Y-12 Plant Criticality Safety Committee and group activities, operations divisions concerns, and proposed future activties. The consultants commended Plant management for the active criticality safety program and supported management's concern for CPAF and UCC-ND interfaces and multiplicity of construction activities in the future.

2. Uranium Chip Fires - Y-12

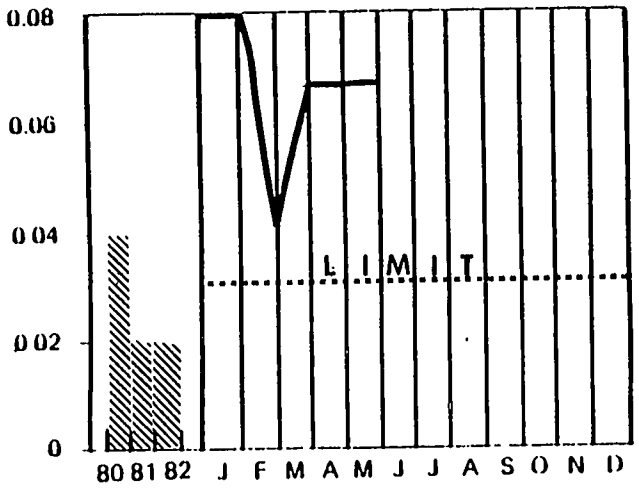
Three depleted uranium chip fires occurred during the week of May 15, 1983. On May 16, a fire occurred in the 9201-5 West machine shop. On May 17, fires occurred in the 9201-5 North machine shop and the A-2 machine shop of 9212. Permanent air samplers were analyzed and hi-volume air samples were taken. All samples were well below the Plant Action Value. There was no significant spread of contamination. Urine samples of employees nearest the fires were obtained in each event; all results were negative.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

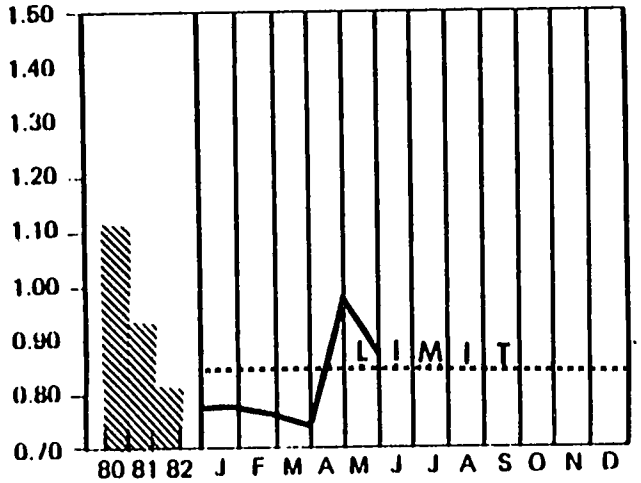
May 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	1	0.30	2	0.12		6	1.79	11	0.66		6	4.44	14	2.07	
ORNL	0	0.00	0	0.00		0	0.00	11	0.68		4	2.96	23	3.41	
OR Y-12	0	0.00	3	0.10		4	0.67	32	1.06		5	2.10	24	2.02	
PGDP	0	0.00	0	0.00		0	0.00	5	0.95		0	0.00	0	0.00	
UCC-ND	1	0.07	5	0.07	0.03	10	0.73	58	0.86	0.85	15	2.72	61	2.21	2.52

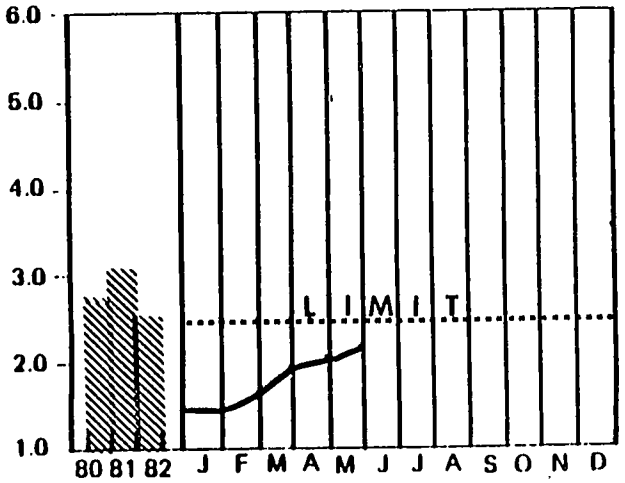
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE JOB DISABLING INJURY RATE



COMMENTS:

The ORGDP Lost Workday Case was the result of a forklift incident. The Recordable Injury/Illness Incident Rate of 0.86 reflects a significant reduction of the 0.92 rate at the end of April.

RGJordan:cj
6/16/83

UNION CARBIDE CORPORATION - SAFETY SUMMARY — APRIL 1983

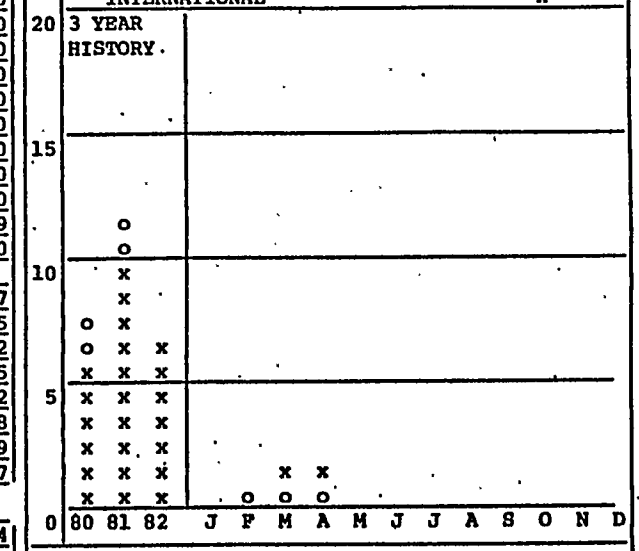
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
Medical Products	0	0.00	0	0.00	4.90
Eth. Oxide/Glycol	0	0.00	1	0.10	0.99
General Departments	0	0.00	4	0.36	0.15
Specialty Chemicals	1	1.09	2	0.52	0.93
Polyolefins	2	0.94	5	0.56	0.85
Solv. & Coat. Mat.	0	0.00	7	0.65	0.92
Carbon Products	1	0.37	7	0.65	1.10
Films-Packaging	0	0.00	6	0.69	1.39
Eth. Oxide Der.	0	0.00	1	0.73	0.40
Sil. & Urethane In.	0	0.00	6	0.74	1.02
Home & Automotive	1	0.48	7	0.77	0.96
Electronics	6	1.46	15	0.94	0.94
U.C. Canada Ltd.	3	0.90	14	1.04	1.28
TOT. DOMESTIC LIMIT					1.05
Battery Products	7	1.53	22	1.13	1.00
Eng. & Hydro.	1	0.46	12	1.26	1.07
Engineering Prod.	5	2.09	15	1.71	2.24
Agricultural Prod.	1	0.35	20	1.72	1.12
Linde	14	2.30	44	1.76	1.81
Spec. Poly. & Comp.	1	1.39	6	2.06	1.10
Metals	4	3.85	19	4.53	2.80
SUBTOTAL DOMESTIC	47	1.00	213	1.10	
Nuclear	19	1.46	48	0.90	0.85
TOTAL DOMESTIC	66	1.10	261	1.06	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	YTD LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
Electronics	0	0.00	0	0.00	0.08	0.00
Specialty Chemicals	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Carbon Products	0	0.00	0	0.00	0.12	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
U.C. Canada Ltd.	0	0.00	0	0.00	0.18	0.00
General Departments	0	0.00	1	0.09	0.07	0.99
Solv. & Coat. Mat.	0	0.00	1(1)	0.09	0.12	0.00
TOT. DOMESTIC LIMIT					0.09	
Eth. Oxide/Glycol	0	0.00	1	0.10	0.14	2.07
Home & Automotive	1	0.48	1	0.11	0.07	0.55
Eng. & Hydro.	0	0.00	1	0.11	0.08	4.32
Linde	1	0.16	5	0.20	0.19	3.55
Agricultural Prod.	0	0.00	3	0.26	0.14	5.42
Spec. Poly. & Comp.	0	0.00	1	0.34	0.10	3.78
Metals	2	1.93	3	0.72	0.28	10.49
SUBTOTAL DOMESTIC	4	0.08	17(1)	0.09		1.47
Nuclear	1	0.08	4	0.07	0.03	2.04
TOTAL DOMESTIC	5	0.08	21(1)	0.08	0.09	1.59

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet
MAR. U.C. So. Africa - Crushed by Elevator

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
U.C. Pan America	6	0.40	24	0.40	0.74
U.C. Europe	0	0.00	12	0.46	0.42
U.C. Eastern	10	0.51	36	0.46	0.80
UC. Africa Mid-East	1	0.52	5	0.62	0.80
U.C. So. Africa	3	0.44	20	0.90	1.78
TOTAL INTERNATIONAL	20	0.40	97	0.50	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	YTD LIMIT	SEV.
U.C. Europe	0	0.00	1	0.04	0.06	1.95
U.C. Pan America	0	0.00	5	0.08	0.10	2.87
U.C. Eastern	2	0.10	8	0.10	0.26	2.02
UC Africa Mid-East	1	0.52	4	0.50	0.48	4.58
U.C. South Africa	1	0.15	6(1)	0.27	0.27	4.11
TOTAL INTERNATIONAL	4	0.08	24(1)	0.12	0.19	2.62

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
TOTAL UCC	86	0.78	358	0.81	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	YTD LIMIT	SEV.
TOTAL UCC	9	0.08	45(2)	0.10	0.14	2.04

Safety performance in all categories is better than that for the same time period last year. The total domestic recordable injury rate went just above the limit at the end of April, but rates in all other categories are still lower than the limits for 1983.

At the end of April last year, we had 73 injuries with days away from work. This year we have had only 45. There are still 11 components which have not had an injury with days away from work this year.

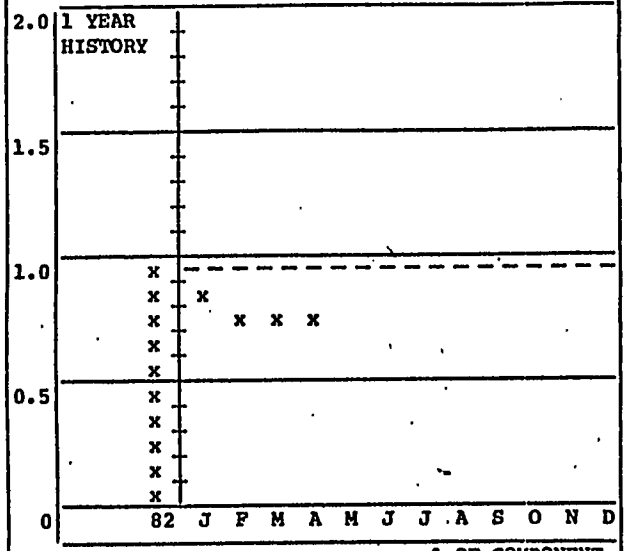
Accidental property loss figures are $300,000 less than they were last year at the end of April even though area companies were not included in last year's figures.

C. E. ELEY

UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

APRIL 1983

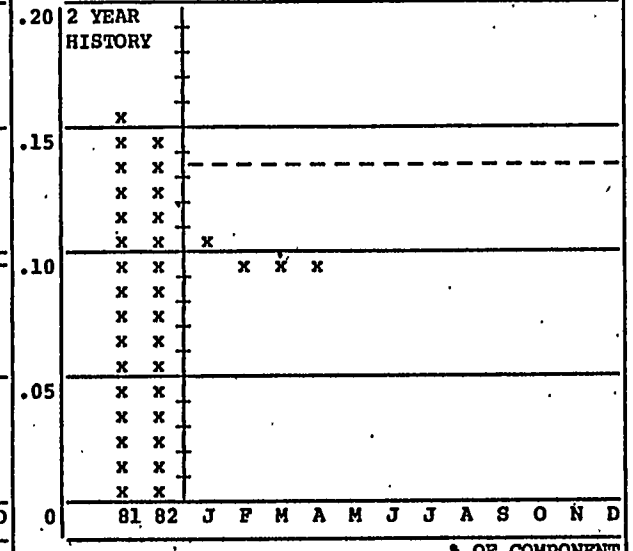
RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



% OF COMPONENT LIMIT

Medical Products	0
Ethylene Oxide/Glycol	10
Films-Packaging	50
U.C. Southern Africa	51
U.C. Pan America	54
Specialty Chemicals	56
U.C. Eastern	58
Carbon Products	59
Polyolefins	66
Solvents & Coatings Materials	71
Silicones & Urethane Inter.	73
Engineering Products	76
U.C. Africa Mid-East	78
Home & Automotive	80
U.C. Canada Ltd.	81
Linde	97
Electronics	100
Nuclear	106
U.C. Europe	110
Battery Products	113
Engineering & Hydrocarbons	118
Agricultural Products	154
Metals	162
Ethylene Oxide Derivatives	183
Specialty Polymers & Composites	187
General Departments	240

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



% OF COMPONENT LIMIT

Battery Products	0
Carbon Products	0
Electronics	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Films-Packaging	0
Medical Products	0
Polyolefins	0
Silicones & Urethane Inter.	0
Specialty Chemicals	0
U.C. Canada Ltd.	0
U.C. Eastern	35
U.C. Europe	67
Ethylene Oxide/Glycol	71
Solvents & Coatings Materials	75
U.C. Pan America	80
U.C. So. Africa	100
U.C. Africa Mid-East	104
Linde	105
General Departments	129
Engineering & Hydrocarbons	138
Home & Automotive	157
Agricultural Products	186
Nuclear	233
Metals	257
Specialty Polymers & Composites	340

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	LIMIT	FATALITIES
Eth. Oxide Der.	0	0.00	3.20	
Medical Products	0	0.00	8.70	
Electronics	4	0.69	2.67	
Polyolefins	2	0.79	4.16	
General Departments	4	1.00	4.61	
Nuclear	46	2.09	2.52	2
Agricultural Products	11	2.71	5.90	
Spec. Poly. & Comp.	3	2.78	5.50	
Solvents & Coat. Mat.	16	4.07	3.94	
Linde	44	4.70	5.90	
Eth. Oxide/Glycol	17	4.94	6.40	
TOT. DOMESTIC LIMIT			5.40	
Battery Products	42	5.60	8.00	2
Carbon Products	23	5.87	9.18	
Metals	10	6.48	7.00	
Films-Packaging	22	6.65	10.00	
U.C. Canada Ltd.	35	6.73	8.55	
Sil. & Urethane Inter	20	6.76	9.00	1
Home & Automotive	24	6.82	6.12	
Eng. & Hydro.	25	7.06	8.01	
Specialty Chem.	10	7.19	6.00	
Engineering Prod.	27	8.43	6.00	
TOTAL DOMESTIC	385	4.14	5.40	5

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	20	107	200
Battery Products	0	0	0
Carbon Products	9	37	240
Electronics	0	0	0
Eng. & Hydro.	0	18	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	0	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	0	0
Linde	60	230	884
Medical Products	0	0	0
Metals	0	20	65
Nuclear	0	18	0
Polyolefins	0	0	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	18	0
U.C. Pan America	0	0	300
U.C. So. Africa	0	83	0
TOTAL UCC	89	673	4363

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
H. E. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher/J. D. Sherrod

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

G. B. Marrow
J. R. Merriman
M. E. Mitchell
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Worrell
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	BOD_5, Cl^-	5	98
ORGDP	None	0	100
Y-12	Zinc	1	99
PGDP	pH	18	95

2. AIRDOS/DARTAB Runs Completed - ORNL

Per a request by DOE, ORNL is evaluating the environmental effects of stack releases for Oak Ridge Operations' facilities using the computer codes AIRDOS and DARTAB. During the month of June, evaluations were completed on five facilities: ORNL, ORGDP, Y-12, the Portsmouth Gaseous Diffusion Plant and the Feed Materials Production Center.

3. Request Received for Hazardous Material Tracking System - ORNL

The American Cyanamid Company has made a formal request to purchase the Hazardous Materials Tracking System information tape. ORNL and UCC-ND have been developing and implementing this system at the Laboratory.

4. Wastewater Characterization Completed - ORNL

In support of efforts to characterize the wastewater from the Y-12 Plant, ORNL completed a comprehensive listing of discharges from its facilities located there. The data compiled will augment a water sampling and analysis program currently under way.

5. Sale of Acetone - ORGDP

Approximately 600 gallons of acetone from the solvent tank west of K-1420 were sold to Dycho Chemical Company on June 27, 1983, for 10 cents per pound. The tank is being purged with nitrogen and will be placed in standby with nitrogen in the tank.

6. Relocation of Geese - ORGDP

On June 27, 1983, 126 Canada Geese were removed from the ORGDP site by state (TWRA) personnel and transported to Greene County. Twenty-five geese were left at the ORGDP site.

7. Hydrology Study of Waste Management Areas Started - Y-12

Law Engineering was selected as contractor to perform a study of hydrologic conditions at the New Hope Pond sludge basin, the S-3 ponds, and the Bear Creek Valley burial grounds. The project is scheduled for completion in September. On June 16 a kickoff meeting was held with Law Engineering for the study of the three waste management areas, and they began their field investigation work the week of June 20.

8. Tennessee Department of Public Health Inspection - Y-12

Mark Burris and Jack Crabtree of the Solid Waste Management Division, Tennessee Department of Public Health, visited the Y-12 Plant on Wednesday, June 1, 1983, to conduct an inspection of our construction spoil area, and the asbestos and aerosol container disposal pits. The purpose of the inspection was to initiate discussions on whether we can permit these facilities or have to close them and begin operations in a new area.

9. UCC Audit of Y-12's Health and Environmental Affairs Activities - Y-12

One June 9-15, Corporate representatives audited the Y-12 Health and Environmental programs. The focus of the audit was on gaining an understanding of how things are and what information is available rather than on criticizing or appraising the handling of these activities in the past. Many UCC-ND people were involved in these briefings, and their help is appreciated.

10. Emulsified Oil Spill - PGDP

On the morning of June 17, 1983, a milky white discharge coming from the eastwest sewer outfall was discovered on a routine inspection of plant effluents. Pipe stoppers were inserted in the under flow dam below the spill and samples were taken. The DOE and the State of Kentucky were notified of the incident and it was decided to release the material after analysis showed it to be a straight-chain hydrocarbon oil. No NPDES violation occurred as a result of the release and fish and other aquatic life seemed to suffer no stress.

INDUSTRIAL HYGIENE

1. Elevated Airborne Levels in Building 9201-4 Investigated - Y-12

Routine sampling surveys conducted in Building 9201-4 in May found elevated airborne mercury levels, some above the threshold limit value (TLV). In response to the elevated levels, during June daily monitoring throughout 9201-4 has been conducted. Increased mercury cleanup activity is the presumed cause of the elevated airborne mercury levels. Daily sampling is being conducted by two methods--collection on activated charcoal for an 8-hour time-weighted average and direct reading instrument--in both occupied and casually occupied areas such as remote stairwells and storage areas. Ventilation was increased approximately 200-300 percent which resulted in airborne levels returning to the previous levels of 0.01 mg/M^3 range.

During the week of June 19, airborne mercury levels gradually increased again showing showing levels of 0.02 to 0.03 mg/M^3 with 0.07 in the stairwell. Reports were

received that some ventilation fans had been turned off which appears to account for the elevated levels. The Utility Department supervision was informed of the airborne trends relative to the amount of ventilation and a priority of keeping 9201-4 fans running was established. On June 24, 23 additional fans were activated resulting in noticeable increased air flows. The airborne level should reflect the ventilation increase.

All Building 9201-4 employees have attended a safety meeting on the increased mercury levels and are receiving daily sampling results. In addition, the employees wishing to participate in hair and urine sampling programs are being informed of the details.

2. Video Tapes on Asbestos - ORNL

ORNL Industrial Hygiene Department has just completed two video tapes on asbestos for employee information/education purposes. One is broader and more general in treatment of the subject and is to be shown to all employees, while the other is more specific and is intended for personnel involved in work with asbestos and asbestos containing materials.

3. Respirator Fit Testing - PGDP

Industrial Hygiene conducted respirator facial fit testing and training for 64 employees during the month of June.

4. Storage Tank Inspection Assistance - PGDP

Industrial Hygiene provided assistance to the Inspection Department prior to the internal inspection of the trichloroethylene storage tank outside C-410. After draining the liquid, the tank was ventilated overnight with plant air. This proved to be inadequate and an air mover was placed at the top opening for two hours. Another check showed the oxygen at 20.9% and the trichloroethylene at less than 5 ppm. The tank was then successfully inspected.

5. Light Surveys - PGDP

Light surveys were conducted in switch house basements in C-531, C-533, C-535, and C-537. The lighting is controlled on automatic timer panels with manual override switches. Even though the current lighting is adequate, other alternatives are being considered to make the lights easier to use, faster to operate, and still to be cost effective.

6. Computerized Recordkeeping System Software Demonstration - ORGDP

Representatives from two suppliers of computer software systems were on hand at ORGDP to demonstrate their capabilities for computerized health, safety, and environmental recordkeeping. On June 21, representatives from Digital Equipment Corporation Demonstrated the "DEChealth" system and on June 29, Flow General Inc. gave a presentation of their "Flow Gemini" system. Both demonstrations were highly informative and well received by Nuclear Division personnel.

7. Sanitary Water System - ORGDP

A survey has been performed by Lockwood-Greene Engineering to determine potential cross-connections in the sanitary water system. Many areas have been corrected and a 1983 GPP (Phase I) to make major modifications is awaiting DOE approval. Phase II (1984 GPP) is to be sent to DOE by September 1983 for approval.

8. Use of 2-methoxyethanol - ORGDP

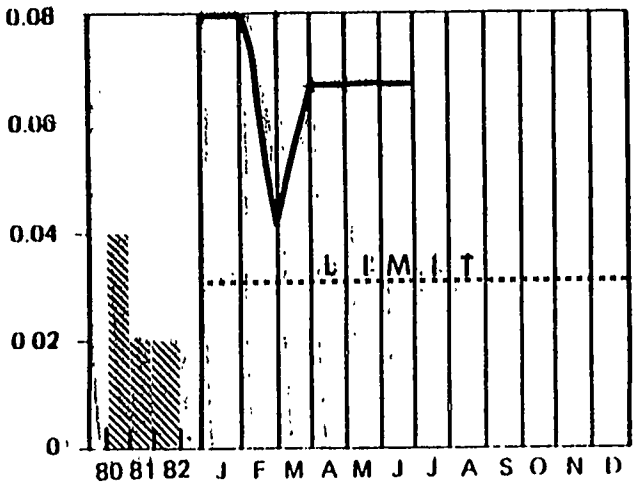
The plant-wide use of 2-methoxyethanol (methyl cellosolve) was reviewed. Sampling was performed in selected areas and recommendations were issued to assure compliance with UCC guidelines.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

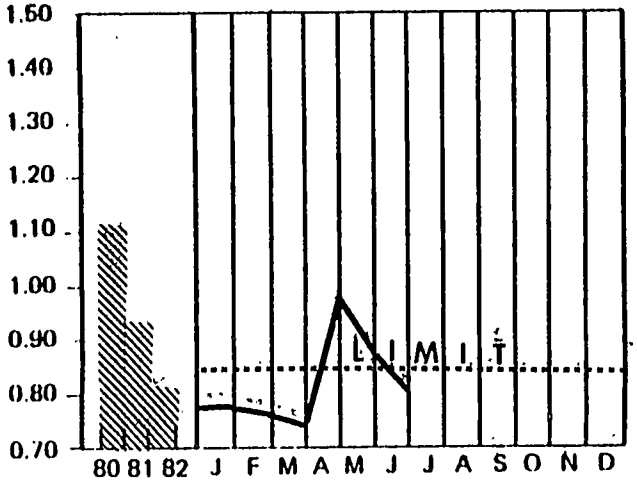
June 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.10		1	0.30	12	0.60		4	2.96	19	2.34	
ORNL	1	0.30	1	0.05		3	0.90	14	0.71		5	3.64	28	3.45	
OR Y-12	0	0.00	3	0.09		4	0.68	36	1.00		8	3.34	32	2.24	
PGDP	0	0.00	0	0.00		0	0.00	5	0.79		1	2.32	1	0.39	
UCC-ND	1	0.07	6	0.07	0.03	8	0.59	67	0.83	0.85	18	3.24	80	2.42	2.52

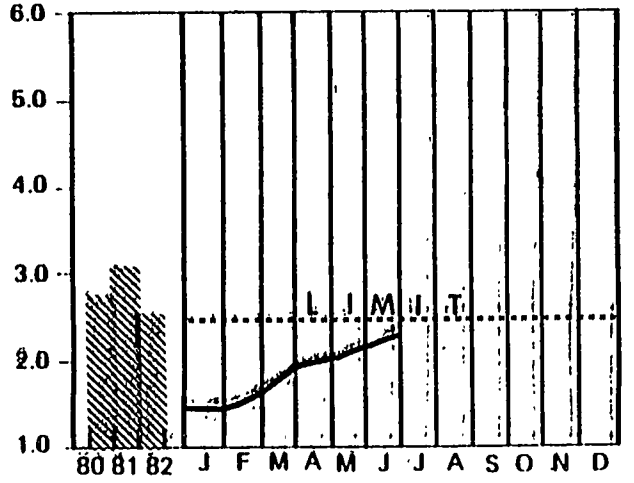
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE



COMMENTS:

The ORNL Lost Workday Case occurred during a security training exercise when a blank firing adapter on a rifle shattered.

At mid year our RII and O-T-J DI Rates are below control limits. New and continuing safety promotional activities will be required in the last half of the year to sustain safety awareness among all employees.

RGJordan:cj
7/15/83

UNION CARBIDE CORPORATION - SAFETY SUMMARY — MAY 1983

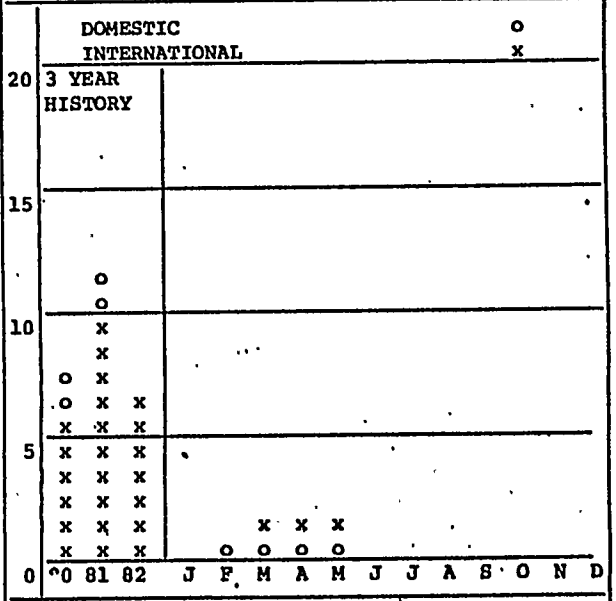
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Medical Products	0	0.00	0	0.00	4.90
Eth. Oxide/Glycol	0	0.00	2	0.16	0.99
General Departments	0	0.00	4	0.29	0.15
Polyolefins	1	0.48	6	0.55	0.85
Eth. Oxide Der.	0	0.00	1	0.59	0.40
Home & Automotive	1	0.45	8	0.71	0.96
Films-Packaging	2	0.96	8	0.74	1.39
Solv. & Coat. Mat.	3	1.24	10	0.76	0.92
Sil. & Urethane In.	1	0.50	8	0.79	1.02
Electronics	4	0.91	19	0.93	0.94
Carbon Products	6	2.10	13	0.95	1.10
Battery Products	3	0.62	25	1.03	1.00
Specialty Chemicals	3	3.24	5	1.05	0.93
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	4	1.26	18	1.08	1.28
Eng. Hydro.	4	1.90	16	1.38	1.07
Agricultural Prod.	2	0.71	22	1.52	1.12
Engineering Prod.	3	1.35	18	1.64	2.24
Spec. Poly. & Comp.	0	0.00	6	1.65	1.10
Linde	8	1.27	52	1.66	1.81
Metals	1	0.93	20	3.80	2.80
SUBTOTAL DOMESTIC	46	0.96	261	1.08	
Nuclear	10	0.73	58	0.86	0.85
TOTAL DOMESTIC	56	0.91	319	1.03	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
Electronics	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Carbon Products	0	0.00	0	0.00	0.12	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
U.C. Canada Ltd.	1	0.32	1	0.06	0.18	0.66
General Departments	0	0.00	1	0.07	0.07	0.79
Solv. & Coat. Mat.	0	0.00	1(1)	0.08	0.12	0.00
Eth. Oxide/Glycol	0	0.00	1	0.08	0.14	2.91
Home & Automotive	0	0.00	1	0.09	0.07	0.44
Eng. & Hydro.	0	0.00	1	0.09	0.08	5.35
TOT. DOMESTIC LIMIT					0.09	
Linde	0	0.00	5	0.16	0.19	3.51
Specialty Chemicals	1	1.08	1	0.21	0.08	0.21
Spec. Poly. & Comp.	0	0.00	1	0.27	0.10	3.02
Agricultural Prod.	1	0.35	4	0.28	0.14	4.98
Metals	0	0.00	3	0.57	0.28	13.10
SUBTOTAL DOMESTIC	3	0.06	20(1)	0.08		1.61
Nuclear	1	0.07	5	0.07	0.03	2.16
TOTAL DOMESTIC	4	0.06	25(1)	0.08	0.09	1.73

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet
MAR. U.C. So. Africa - Crushed by Elevator

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	5	0.31	29	0.38	0.74
U.C. Europe	1	0.16	13	0.40	0.42
U.C. Eastern	10	0.51	46	0.48	0.80
UC. Africa Mid-East	0	0.00	5	0.50	0.80
U.C. So. Africa	4	0.54	25	0.69	1.78
TOTAL INTERNATIONAL	20	0.39	118	0.47	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	1	0.03	0.06	1.69
U.C. Pan America	1	0.06	6	0.08	0.10	3.24
U.C. Eastern	3	0.15	11	0.12	0.26	2.30
U.C. South Africa	2	0.27	8(1)	0.22	0.27	4.13
U.C. Africa Mid-East	0	0.00	4	0.40	0.48	3.67
TOTAL INTERNATIONAL	6	0.12	30(1)	0.12	0.19	2.82

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	76	0.67	437	0.78	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	10	0.09	55(2)	0.10	0.14	2.22

Safety performance in all categories worldwide continues better than that for the same time period last year. The total domestic recordable injury rate, which went just above the limit at the end of April, improved in May and now rates in all categories are once again lower than the limits for 1983.

At the end of May last year, we had 90 injuries with days away from work. This year we have had only 55. There are still nine components which have not had any injury with days away from work this year.

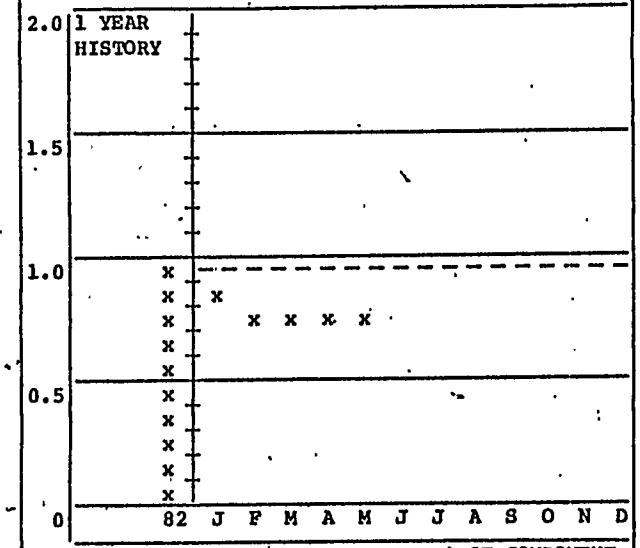
The year-to-date off-the-job disabling injury rate is 24% lower than it was for the same time period last year.

C. E. ELEY

UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

MAY 1983

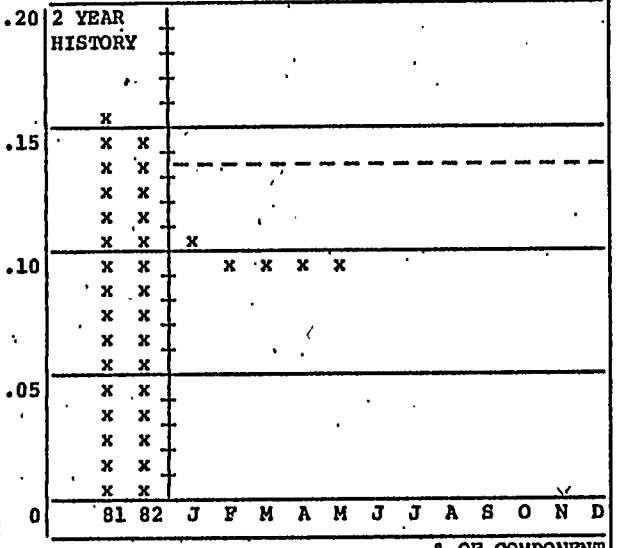
RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



% OF COMPONENT LIMIT

Medical Products	0
Ethylene Oxide/Glycol	16
U.C. So. Africa	39
U.C. Pan America	51
Films-Packaging	53
U.C. Eastern	60
U.C. Africa Mid-East	63
Polyolefins	65
Engineering Products	73
Home & Automotive	74
Silicones & Urethane Inter.	77
Solvents & Coatings Materials	83
U. C. Canada Ltd.	84
Carbon Products	86
Linde	92
U. C. Europe	95
Electronics	99
Nuclear	101
Battery Products	103
Specialty Chemicals	113
Engineering & Hydrocarbons	129
Agricultural Products	136
Metals	136
Ethylene Oxide Derivatives	148
Specialty Polymers & Composites	150
General Departments	193

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



% OF COMPONENT LIMIT

Battery Products	0
Carbon Products	0
Electronics	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Films-Packaging	0
Medical Products	0
Polyolefins	0
Silicones & Urethane Inter.	0
U.C. Canada Ltd.	33
U.C. Eastern	46
U.C. Europe	50
Ethylene Oxide/Glycol	57
Solvents & Coatings Materials	67
U.C. Pan America	80
U.C. So. Africa	81
U.C. Africa Mid-East	83
Linde	84
General Departments	100
Engineering & Hydrocarbons	113
Home & Automotive	129
Agricultural Products	200
Metals	204
Nuclear	233
Specialty Chemicals	263
Specialty Polymers & Composites	270

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	FATALITIES
Eth. Oxide Der.	0	0.00	3.20	
Medical Products	0	0.00	8.70	
Electronics	7	0.93	2.67	
Polyolefins	4	1.27	4.16	
General Departments	7	1.40	4.61	
Nuclear	61	2.21	2.52	2
Agricultural Products	16	3.16	5.90	
Spec. Poly. & Comp.	5	3.70	5.50	
Eth. Oxide/Glycol	21	4.91	6.40	
Battery Products	49	5.11	8.00	2
Linde	62	5.32	5.90	
TOT. DOMESTIC LIMIT			5.40	
Solvents & Coat. Mat.	27	5.57	3.94	
Films-Packaging	24	5.81	10.00	
Sil. & Urethane Inter	22	5.98	9.00	1
Carbon Products	31	6.02	9.18	
Specialty Chem.	11	6.34	6.00	
U.C. Canada Ltd.	43	6.61	8.55	
Home & Automotive	30	6.85	6.12	
Metals	16	8.22	7.00	
Eng. & Hydro.	38	8.77	8.01	
Engineering Prod.	36	8.93	6.00	
TOTAL DOMESTIC	510	4.37	5.40	5

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	107	200
Battery Products	0	0	0
Carbon Products	0	37	240
Electronics	69	69	0
Eng. & Hydro.	0	18	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	0	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	25	25	0
Linde	30	260	884
Medical Products	0	0	0
Metals	12	32	65
Nuclear	0	18	0
Polyolefins	8	8	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	14	32	0
U.C. Pan America	0	0	300
U.C. So. Africa	0	83	0
TOTAL UCC	158	831	4363

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
R. W. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher/J. D. Sherrod

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Worrell
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Total Suspended Solids	2	99
ORGDP	None	0	100
Y-12	None	0	100
PGDP	pH	18	95

2. Hazardous Waste Permit Application Complete - ORNL

ORNL has addressed satisfactorily all EPA comments and questions on the permit application for the Hazardous Waste Storage Facility. The EPA's plans are to issue the permit in October 1983.

3. Core Drilling at D&D Sites Complete - ORNL

During July the collection of all soil cores around facilities scheduled for decontamination and decommissioning was completed. Detailed radiochemical analyses are now under way.

4. Y-12 Sampling Program Begun - ORNL

The characterization of wastewater from ORNL facilities physically located at Y-12 was begun in July. The results of this characterization will be used, along with data being collected by Y-12 personnel, to meet the commitment DOE made in its Memorandum of Understanding with EPA and the State of Tennessee.

5. State and EPA Inspection - ORGDP

On July 13, 1983, the State of Tennessee and the Environmental Protection Agency, Region IV, visited the ORGDP for inspection and evaluation. An initial briefing was held to discuss the operations at the plant as well as to review monitoring programs. A tour was conducted to view the environmental effluent stations, the Central Control Facility, and the K-1232 facility.

6. Solid Waste Site Inspection - ORGDP

On July 19, 1983, the Tennessee Division of Solid Waste Management (DSWM) conducted a preliminary site evaluation of the ORGDP nonradioactive solid waste disposal areas. The site evaluation was conducted by a DSWM geologist as part of the permitting activities for these sites.

7. "Second Round" NPDES Permits - ORGDP

On July 28, 1983, a meeting was held with the Tennessee Department of Health and Environment, Environmental Protection Agency, Department of Energy, Y-12, and K-25 personnel to discuss revised NPDES permits. Discussion consisted of a review of the K-25 treatment process, presentation of Y-12 data, and a review of the permit process including the anticipated schedule.

8. Tours and Briefings Re Waste Management - Y-12

On June 29, Dr. Michael Bruner and Dr. George Walter, Deputy Commissioners, Tennessee Department of Public Health, visited Y-12. Accompanying the two commissioners were Ms. Susan Hegert representing the State Department of Public Health Health, Public Information Office, and Mr. Gerald Ingram of the Water Quality Control Division. The group toured all areas addressed in the Memorandum of Understanding, which included the S-3 ponds, burial grounds in Bear Creek Valley, Alpha 4, New Hope Pond, New Hope sludge basin, and the upper portion of the industrial ditch. Dr. Bruner indicated at one point, "Y-12 knows what the problems are and you appear to be working on solutions." Dr. Bruner was extremely enthusiastic about work being done at the S-3 ponds.

On July 6, members of the Interagency Task Force were given a tour and briefing of the facilities involved in the mercury investigation and the Memorandum of Understanding between the Department of Energy, U.S. Environmental Protection Agency, and the State of Tennessee Department of Safety and Health. The tour included the S-3 ponds, Bear Creek Burial Grounds, New Hope Pond, and East Fork Poplar Creek. Agencies represented included the U.S. House of Representatives, Subcommittee on Investigations and Oversight, Washington; Department of Interior U.S. Geologic Survey; State of Tennessee, Department of Health and Environment, Nashville; State of Tennessee Department of Health and Environment, Division of Solid Waste Management and Division of Water Management, Knoxville; State of Tennessee, Office of General Counsel for the Department of Health and Environment, Nashville; U.S. Environmental Protection Agency, Atlanta and Athens, Georgia; Tennessee Valley Authority, Knoxville, Chattanooga and Norris, Tennessee, and Muscle Shoals, Alabama; and the City of Oak Ridge.

On July 6, Joe La Grone, Manager, DOE-Oak Ridge Operations; W. R. Bibb, Assistant Manager for Safety and Environment; J. L. Foutch, Deputy Chief Counsel; and H. D. Hickman, Assistant Manager for Defense Programs, DOE-ORO, were given a tour and briefing of the burial grounds, S-3 ponds, and the PCB oil pond.

On July 7, Dr. Frank M. D'Itri, Professor of Water Chemistry, Michigan State University, was given a tour and briefing of the burial grounds, S-3 ponds, New Hope Pond, and East Fork Poplar Creek. Dr. D'Itri served as an expert witness at the request of Congress.

On July 8, Mr. S. David Freeman, Managing Director, Tennessee Valley Authority was given a tour and briefing of the S-3 ponds, burial grounds, New Hope Pond, and the East Fork Poplar Creek.

On July 15, a tour and briefing was provided of the sites covered under the Memorandum of Understanding for the following people: James E. Word, Commissioner, Tennessee Department of Health and Environment; Michael T. Bruner, Assistant Commissioner; Bill Koch, Legal Counsel for Governor Lamar

Alexander; State Representatives Randy McNally of Oak Ridge, and Jim Henry, Kingston; Bill Barrick, Legal Counselor to the Department of Health and Environment; Anderson County Attorney General James N. Ramsey; W. H. Bibb, Acting DOE Assistant Manager for Health and Safety; James L. Foutch, DOE Deputy Chief Counsel; and members of the news media.

On July 19-20, representatives from Time magazine were given a tour and briefing at the S-3 ponds, New Hope Pond, and Bear Creek Burial ground.

9. Solid Waste Disposal - Y-12

On July 19, plans for the disposal of special wastes (BeO, asbestos, glass, and aerosol cans) were discussed with Glen Pruitt from the Tennessee Division of Solid Waste Management (DSWM) during a preliminary site evaluation visit. Plans are to 1) modify the permit at the Central Sanitary Landfill II to allow the disposal of glass with the sanitary wastes, the disposal of BeO, asbestos, and aerosol cans in dedicated trenches; 2) permit the construction spoils area located south of the S-3 ponds; and 3) close the current disposal areas in Bear Creek Valley where we have been disposing of these special wastes. Comments by Mr. Pruitt seemed very favorable to the State accepting our formal proposal which will be made in the next two weeks.

10. C-405 Incinerator Test Burn - PGDP

After being cited by the State of Kentucky for opacity violations at the classified paper incinerator in March, several unsuccessful test burns were conducted. Following completion of repairs on the scrubber and combustion blower, a representative of the Kentucky Division of Air Pollution Control observed a test burn on July 13 in which the incinerator functioned well within State guidelines.

11. pH Violations - PGDP

A team has been chosen to study the problems of excessive pH violations in Big Bayou Creek. The team will recommend a method to reduce the number of violations from approximately 50 per year to less than 10.

INDUSTRIAL HYGIENE

1. Histoplasmosis Investigation Concluded - Y-12

A representative from the CDC in Atlanta conducted a survey for pigeon droppings through Building 9201-4. More than twenty samples were taken and cultured from April until July. None of the samples yielded Histoplasma Capsulatum. CDC advised that the area be kept clean with soap, water, and only a mild disinfectant.

2. Tennessee Department of Public Health Inspection - Y-12

Mark Burris and Jack Crabtree of the Solid Waste Management Division, Tennessee Department of Public Health, visited the Y-12 Plant on Wednesday, June 1, 1983, to conduct an inspection of our construction spoil area, and the asbestos and aerosol container disposal pits. The purpose of the inspection was to initiate discussions on whether we can permit these facilities or have to close them and begin operations in a new area.

3. Mercury Airborne Levels Remain Consistent in Alpha-4 - Y-12

Industrial Hygiene is continuing to conduct the daily mercury sampling program in Building 9201-4. Airborne mercury levels are staying in the 0.004 - 0.008 range. This is consistent with the levels found before the increased cleanup prior to May 1983.

4. Laboratory Fume Hoods Survey - PGDP

Three laboratory hoods in C-710 were surveyed for face velocities and noise levels The hoods had been set recently and were still under contract. It was determined that the face velocities met specifications, but the noise level was unacceptable. Some adjustment was made and the noise level was reduced; however, the noise level is still unacceptable.

5. Nitric Acid Tank Inspection in C-400 - PGDP

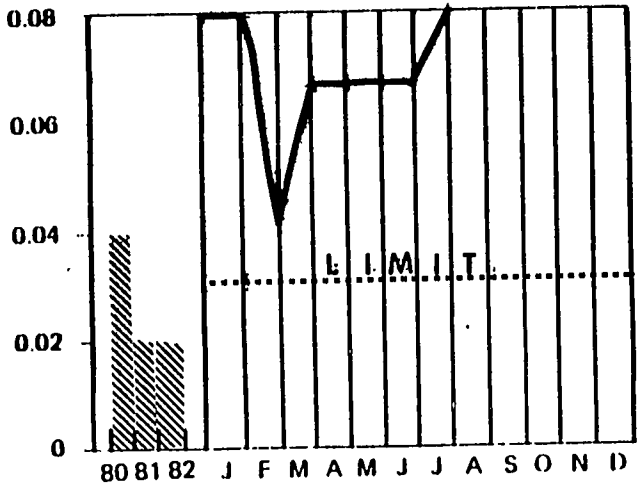
Industrial Hygiene was requested to evaluate the workplace environment prior to the inspection of the C-400 nitric acid tank. The contents were removed, the walls were sprayed with water, and the water was pumped out. The spraying and pumping was repeated three times. An air mover was put on top of the tank. The tank required ventilation over the weekend before acceptable levels of nitric acid (<0.5 ppm) were reached.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

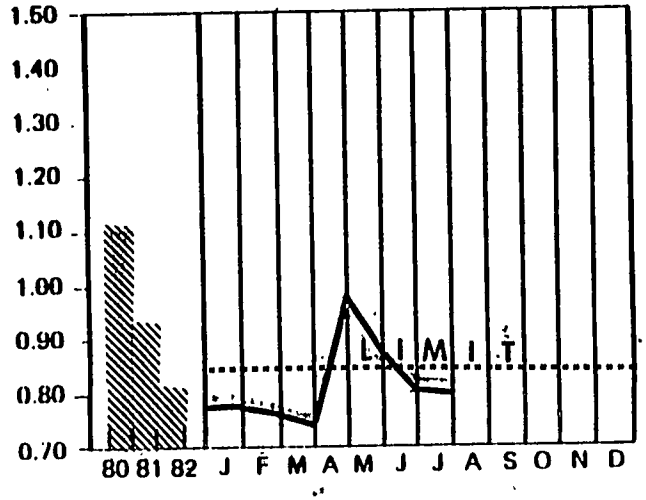
July 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.09		1	0.35	13	0.57		3	2.21	21	2.21	
ORNL	1	0.35	2	0.09		3	1.04	17	0.76		7	5.09	35	3.69	
OR Y-12	0	0.00	3	0.07		4	0.80	40	1.00		5	2.08	37	2.22	
PGDP	0	0.00	0	0.00		1	1.13	6	0.84		1	2.33	2	0.66	
UCC-ND	1	0.09	7	0.08	0.03	9	0.78	76	0.82	0.85	16	2.88	95	2.46	2.52

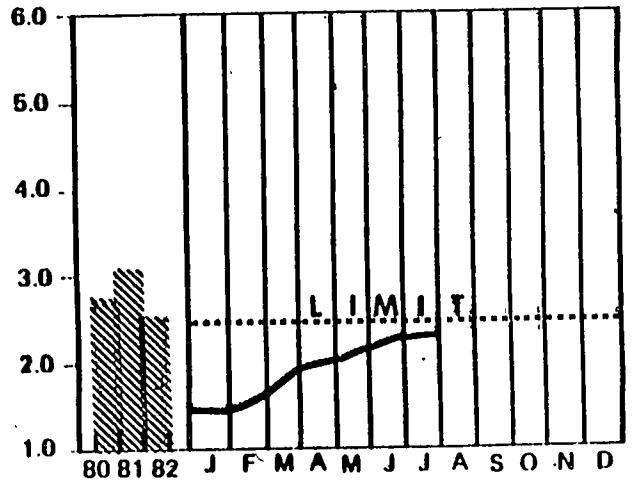
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE



COMMENTS: It is obvious from the indices that our programs and efforts to enhance safety, both at work and away from work, must continue to be given serious attention by all employees. The Recordable Injuries/Illnesses experience does indicate that our programs are effective in limiting the number of on-the-job incidents.

RGJordan:cj
8/16/83

UNION CARBIDE CORPORATION - SAFETY SUMMARY — JUNE 1983

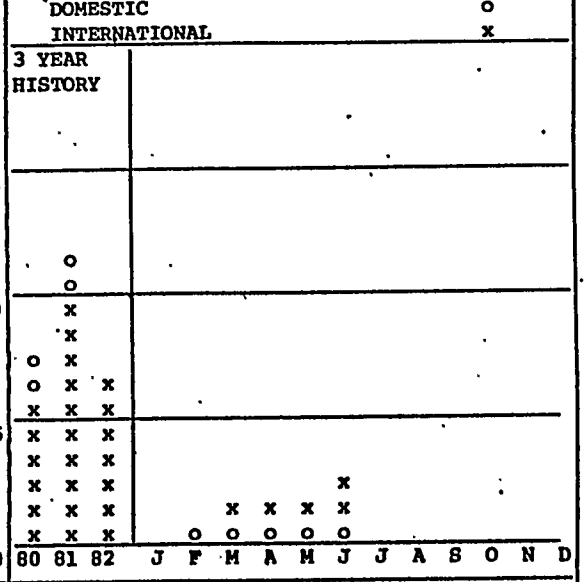
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Medical Products	0	0.00	0	0.00	4.90
General Departments	0	0.00	4	0.24	0.15
Eth. Oxide/Glycol	2	0.88	4	0.27	0.99
Eth. Oxide Der.	1	0.00	1	0.49	0.40
Polyolefins	1	0.44	7	0.53	0.85
Home & Automotive	0	0.00	8	0.59	0.96
Sil. & Urethane In.	0	0.00	8	0.66	1.02
Solv. & Coat. Mat.	2	0.75	12	0.76	0.92
Films-Packaging	2	0.86	10	0.76	1.39
Specialty Chemicals	0	0.00	5	0.87	0.93
Battery Products	4	0.76	29	0.98	1.00
Carbon Products	4	1.34	17	1.02	1.10
U.C. Canada Ltd.	3	0.86	21	1.04	1.28
TOT. DOMESTIC LIMIT					1.05
Electronics	10	1.95	28	1.11	0.94
Eng. & Hydro.	1	0.45	17	1.23	1.07
Spec. Poly. & Comp.	0	0.00	6	1.36	1.10
Agricultural Prod.	5	1.79	27	1.57	1.12
Linde	9	1.42	60	1.59	1.81
Engineering Prod.	3	1.34	21	1.59	2.24
Metals	11	9.09	31	4.79	2.80
SUBTOTAL DOMESTIC	57	1.13	316	1.08	
Nuclear	8	0.59	66	0.82	0.85
TOTAL DOMESTIC	65	1.02	382	1.03	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Engineering Prod.	0	0.00	0	0.00	0.12	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
Electronics	1	0.19	1	0.04	0.08	0.76
U.C. Canada Ltd.	0	0.00	1	0.05	0.18	0.55
General Departments	0	0.00	1	0.06	0.07	0.66
Carbon Products	1	0.33	1	0.06	0.12	0.42
Home & Automotive	0	0.00	1	0.07	0.07	0.37
Eng. & Hydro.	0	0.00	1	0.07	0.08	5.79
Eth. Oxide/Glycol	0	0.00	1	0.07	0.14	3.48
TOT. DOMESTIC LIMIT					0.09	
Solv. & Coat. Mat.	1	0.38	2(1)	0.13	0.12	0.13
Specialty Chemicals	0	0.00	1	0.17	0.08	3.99
Linde	2	0.32	7	0.19	0.19	4.70
Spec. Poly. & Comp.	0	0.00	1	0.23	0.10	2.48
Agricultural Prod.	0	0.00	4	0.23	0.14	4.17
Metals	2	1.65	5	0.77	0.28	19.92
SUBTOTAL DOMESTIC	7	0.14	27(1)	0.09		2.05
Nuclear	1	0.07	6	0.07	0.03	2.33
TOTAL DOMESTIC	8	0.12	33(1)	0.09	0.09	2.11

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet
MAR. U.C. So. Africa - Crushed by elevator
JUNE U.C. Pan America - Buried in ore silo

*Fatalities shown in ( )

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Europe	1	0.15	14	0.36	0.42
U.C. Pan America	7	0.46	36	0.40	0.74
UC. Africa Mid-East	0	0.00	5	0.41	0.80
U.C. Eastern	10	0.50	62	0.54	0.80
U.C. So. Africa	8	1.06	33	0.76	1.78
TOTAL INTERNATIONAL	26	0.50	150	0.50	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	1	0.03	0.06	1.40
U.C. Pan America	2(1)	0.13	8(1)	0.09	0.10	3.59
U.C. Eastern	4	0.20	15	0.13	0.26	2.06
U.C. South Africa	4	0.53	12(1)	0.28	0.27	4.72
U.C. Africa Mid-East	0	0.00	4	0.33	0.48	3.02
TOTAL INTERNATIONAL	10(1)	0.19	40(2)	0.13	0.19	2.86

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	91	0.79	532	0.79	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	18(1)	0.16	73(3)	0.11	0.14	2.44

The Corporation experienced its third fatality of the year when an employee was buried in a tungsten ore storage silo at a mine in Brazil.

The June total of 18 injuries with days away from work was the highest one month total this year. However, safety performance in all categories worldwide continues to be better than last year. Rates in all categories are equal to or lower than the 1983 limits. There are still seven components which have not had an injury with days away from work this year.

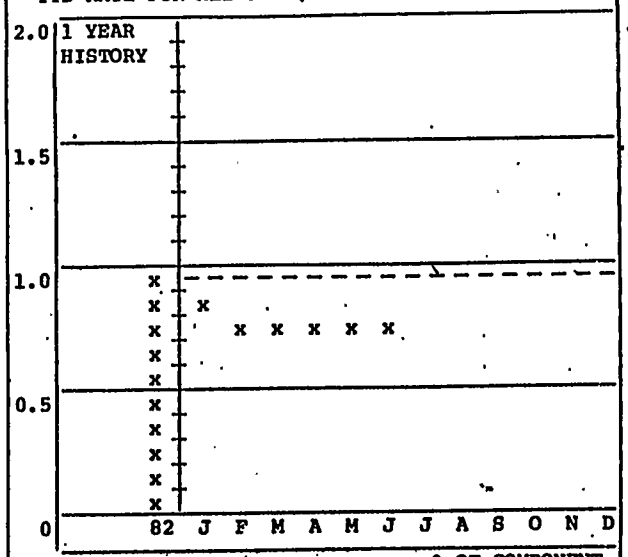
C. E. Eley

IT'S A SNAP WITH SEAT BELTS.

UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

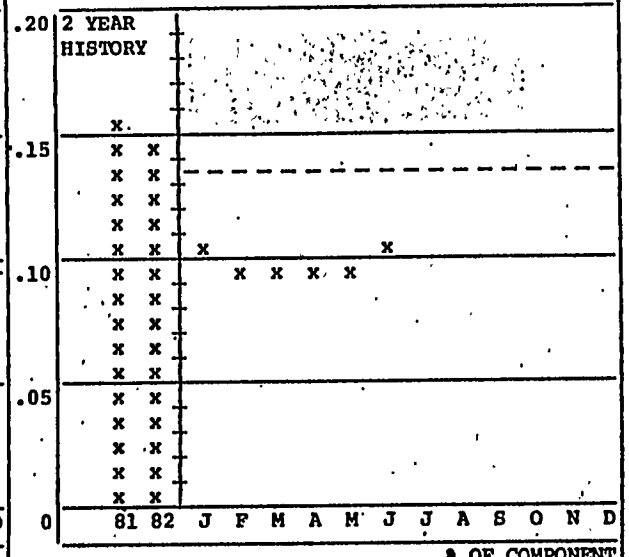
JUNE 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	27
U.C. So. Africa	43
U.C. Africa Mid-East	51
U.C. Pan America	54
Films-Packaging	55
Home & Automotive	61
Polyolefins	62
Silicones & Urethane Inter.	65
U.C. Eastern	68
Engineering Products	71
U.C. Canada Ltd.	81
Solvents & Coatings Materials	83
U.C. Europe	86
Linde	88
Carbon Products	93
Specialty Chemicals	94
Nuclear	96
Battery Products	98
Engineering & Hydrocarbons	115
Electronics	118
Ethylene Oxide Derivatives	123
Specialty Polymers & Composites	124
Agricultural Products	140
General Departments	160
Metals	171

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Battery Products	0
Engineering Products	0
Ethylene Oxide Derivatives	0
Films-Packaging	0
Medical Products	0
Polyolefins	0
Silicones & Urethane Inter.	0
U.C. Canada Ltd.	28
Carbon Products	50
Electronics	50
Ethylene Oxide/Glycol	50
U.C. Eastern	50
U.C. Europe	50
U.C. Africa Mid-East	69
General Departments	86
Engineering & Hydrocarbons	88
U.C. Pan America	90
Home & Automotive	100
Linde	100
U.C. So. Africa	104
Solvents & Coatings Materials	108
Agricultural Products	164
Specialty Chemicals	213
Specialty Polymers & Composites	230
Nuclear	233
Metals	275

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	YTD FATALITIES
Medical Products	0	0.00	8.70	
Polyolefins	4	1.06	4.16	
Electronics	10	1.10	2.67	
Eth. Oxide Der.	1	1.30	3.20	
General Departments	9	1.50	4.61	
Nuclear	80	2.42	2.52	2
Agricultural Products	21	3.46	5.90	
Spec. Poly. & Comp.	8	4.94	5.50	
Battery Products	60	5.21	8.00	2
Specialty Chem.	11	5.29	6.00	
Linde	75	5.38	5.90	
TOT. DOMESTIC LIMIT			5.40	
Films-Packaging	28	5.64	10.00	
Eth. Oxide/Glycol	29	5.68	6.40	
Carbon Products	37	5.93	9.18	
Sil. & Urethane Inter	30	6.74	9.00	1
Solvents & Coat. Mat.	39	6.76	3.94	
Home & Automotive	36	6.87	6.12	
Metals	17	7.18	7.00	
U.C. Canada Ltd.	60	7.65	8.55	
Eng. & Hydro.	47	9.14	8.01	
Engineering Prod.	47	9.70	6.00	
TOTAL DOMESTIC	649	4.64	5.40	5

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	107	200
Battery Products	0	0	0
Carbon Products	18	55	240
Electronics	0	69	0
Eng. & Hydro.	0	18	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	102	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Linde	15	275	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	7	25	0
Polyolefins	0	8	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	32	0
U.C. Pan America	0	0	300
U.C. So. Africa	7	90	0
TOTAL UCC	149	992	4363

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
R. W. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Worrell
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Ammonia, BOD_5, Cl^-, TSS	8	96
ORGDP	pH	30	91
Y-12	None	0	100
PGDP	pH	15	95

2. State/EPA Inspection - ORNL

On August 23, 1983, representatives of the State of Tennessee and the Environmental Protection Agency toured the facilities at ORNL. While acknowledging that environmental problems exist at ORNL, these representatives complimented ORNL on its awareness of the scope of the problems and on its environmental program established to address these problems.

3. Results of Wastewater Characterization Sent to Y-12 - ORNL

The results of a monitoring program on discharges from ORNL facilities physically located at Y-12 were transmitted to a Y-12 task force in August. These results are being incorporated into a report being generated to comply with provisions of the Memorandum of Understanding among DOE, EPA, and the State of Tennessee.

4. Release of Radioiodine - ORNL

A leak in a low-level radioactive liquid waste line has resulted in small amounts of Iodine-131 being released to ORNL's Sanitary Treatment Plant and from there to White Oak Creek and the Clinch River. The location of the leak has been identified and repair efforts are under way.

5. Review of RCRA Program - ORGDP

On August 4, 1983, representatives from DOE-Washington Environmental Protection Branch, along with members of DOE-ORO Environmental Protection Branch reviewed the ORGDP Resource Conservation and Recovery Act (RCRA) program. This visit was initiated to familiarize the DOE-Washington representatives with the ORGDP program. In the near future, DOE will be discussing the RCRA regulations with the Environmental Protection Agency to develop an understanding as to which agency will handle compliance.

6. Treatment of Y-12 Wastes - ORGDP

The Memorandum of Understanding (MOU) signed on May 26, 1983, by the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Tennessee Department of Health and Environment (TDHE) requires that all discharge of wastes to the S-3 ponds be eliminated and that a plan be developed for the interim treatment and/or elimination of East Fork Poplar Creek discharges. In accordance with these objectives, the Y-12 wastes will be collected and transported to the ORGDP for treatment. Only those wastes compatible with the available facilities at the ORGDP will be transported. Wastes which can be treated at the ORGDP, but cannot be discharged because of NPDES permit limitations, will be transported back to the Y-12 facilities for interim storage and subsequent treatment and disposal.

In order to initiate this project of treating Y-12 waste streams, it is necessary that the existing NPDES permit application be revised. This project would be an interim program and would remain in effect until facilities at Y-12 could be constructed to effect treatment. The revised NPDES permit application was submitted to DOE on August 5, 1983.

7. Compliance Evaluation Report - ORGDP

On July 13, 1983, a Compliance Evaluation Inspection of the K-25 facility was conducted by staff of the Tennessee Division of Water Management (DWM) and the Environmental Protection Agency (EPA). The report detailing the conclusions of the Compliance Evaluation Inspection was received during August. Although some concerns were noted, the facility is generally doing an excellent job of environmental monitoring and control. The report outlined 15 major areas of interest, some items needing corrective action and others requiring more information. A response will be prepared within 30 days on the areas of interest.

8. Commercial Disposal - ORGDP

Materials previously stored at K-1025-C were shipped to Rollins Environmental Services, Inc., for disposal. On August 9, 1983, a total of 108 drums left ORGDP and were received at the Rollins Baton Rouge location August 11, 1983.

9. Raw Water Sampling - ORGDP

A release of iodine 131 at ORNL over the course of a week necessitated sampling the ORGDP raw water intake at K-1515 once per shift. Samples analyzed at ORNL revealed no detectable iodine 131 present in the water.

Tennessee Public Health, radiological officials took duplicate water samples on August 31, 1983, in an effort to confirm that there was no public health concern with regard to the iodine release.

10. Revised Inert Landfill Permit - PGDP

On August 12, 1983, a revised inert landfill permit application was sent to the DOE for submission to the State of Kentucky. Changes and additions requested by the Kentucky Division of Waste Management were included in the revised application.

11. Waste Management Briefings and Tours - Y-12

On July 28, representatives from the Environmental Protection Agency were given a tour and briefing of the items listed in the Memorandum of Understanding between DOE, EPA, and the State of Tennessee Department of Health and Environment.

On August 4, D. E. Patterson, Acting Director, Office of Operational Safety, Thomas Frangos, Technical Advisor, Operational Safety, Health, and Environment Division, DOE Headquarters, were given a tour and briefing of the facilities discussed in the MOU. Significant discussions were held concerning the need for identification of waste disposal alternatives for hazardous/radioactive co-contaminated waste. The need for regulatory relief to allow Y-12 to begin to handle its co-contaminated waste storage was reviewed. The DOE Headquarters representatives indicated that they would explore potential agreements with the State, EPA, and DOE concerning the disposal of co-contaminated material.

12. Groundwater Monitoring Wells - Y-12

Core drilling for the emplacement of the groundwater monitoring wells in the Mercury Subsurface Investigation Program was begun the last week of July.

13. Memorandum of Understanding (MOU) - Y-12

During August, two documents were submitted to DOE-ORO in compliance with the Memorandum of Understanding with the Environment Protection Agency and the Tennessee Department of Health and Environmental (TDHE): Proposal to Closeout the S-3 Ponds, and Suitability and Management Practices of New Hope Pond Sediment Disposal Basin.

On August 10, a meeting was held with TDHE officials in Knoxville to discuss specific commitments relative to describing all discharges to the Upper East Fork Poplar Creek (UEFPC). Specific requirements for permit applications were also explored under the National Pollution Discharge Elimination System (NPDES). A follow-up meeting was held at DOE-ORO on August 19 with both technical and administrative personnel from TDHE headquarters and Knoxville offices. Topics covered included current schedules for identification and permitting of several categories of flows to UEFPC. Target dates were proposed for submittal of proposals to TDHE of schedules for permit application and implementation of interim and final treatment and/or best management practices.

13. Interim Pollution Elimination Action - Y-12

We have eliminated the wastewater flow from a lithium salvage operation. This process was releasing approximately 1,300 pounds per month of salts to UEFPC. The wastewater is being evaporated and the remaining salts are disposed in plastic-lined drums. This action will result in the reduction of the chemicals lost to UEFPC by over 15,000 pounds per year.

14. Closeout of S-3 Ponds - Y-12

The process of denitrification of the southwest pond was completed in August. Minor changes were made to the piping system and a floating aerator installed to mix air with liquid to satisfy the biological oxygen demand of the waste. Neutralization of an additional pond was also started this month.

15. Solid Waste Disposal - Y-12

Formal descriptions were made to DOE and TDHE for acceptance of beryllium oxide, asbestos, glass, and aerosol cans as special wastes. We have also received conditional approval from DOE and TDHE of our closure plan for the previous No. 1 landfill site.

Minor changes in our closure plan will enable us to begin implementation in the near future.

INDUSTRIAL HYGIENE

1. Addition to Staff - ORNL

Mike Brooks, a recent graduate of UT Master Program in Occupational Health, has joined ORNL as a staff industrial hygienist.

2. Tennessee Valley Section of the American Industrial Hygiene Association Meeting - ORNL

"Asbestos: The Current Health Issues" is the theme of this year's annual Technical Meeting of the Tennessee Valley Section of the American Industrial Hygiene Association. The meeting will be held in Knoxville, October 6 and 7, at the Knoxville Hilton. Several speakers will be from UCC-ND.

3. Training of Security Inspectors and Officers - ORGDP

Training was provided for the ORGDP Security Inspectors and Officers regarding potential health hazards of strenuous exercise in conjunction with the physical fitness training program mandated by the DOE.

4. Industrial Hygiene - Y-12

An electrical line supplying power to Building 9201-4 was reported out of service on July 31. A survey of supply and exhaust fans was performed and it was found that only the F fan room was affected. All the exhaust fans were operating and all but one supply system were operating. An Industrial Hygiene Technician conducted a complete building survey, particularly concentrating in the second floor office areas, at 5:30 a.m. on August 1 prior to employee entry. The highest Hg concentration was found to be 0.01 mg/M^3. These results were reported to the PSS Office and 9201-4 engineering supervision.

5. Methane Gas in Sprinkler System Lines Investigated - Y-12

Industrial Hygiene was called to conduct an explosive survey for Rust Engineering while they were working on the sprinkler system for Building 9711-5. Methane gas was detected in the lines and an investigation is being conducted.

6. Air Flow Level in B-2E Sampled and Evaluated - Y-12

Routine sampling of the 9204-2E mercury operations revealed a high air sample on July 28. Industrial Hygiene investigated and found the face velocity of the lab hoods in the area to be inadequate. Supervision was notified and contacted Utilities to bring the air flow up to an acceptable level (150 lfm). Industrial Hygiene is sampling daily to further evaluate the potential for personnel exposure and the need for further corrective action.

7. Respirator Training - PGDP

During the month, 82 people attended respirator training. The classes will continue for those employees needing respirator training.

8. LDB Sampling Program Results - PGDP

LDB results of water samples taken in July were received. Of the 36 samples taken from cooling towers, air conditioning systems, C-611 clarifiers, and the Ohio River, none exceeded the current action level of 10^6 organisms/liter.

9. Workplace Monitoring - PGDP

Industrial Hygiene monitored the workplace environment during the cleaning of a failed synchronous compressor motor. A plastic enclosure with added ventilation was built around the motor before the motor was sprayed with trichloroethane. Cleaning personnel were dressed in a Graylite suit with breathing air being supplied from compressed air tanks.

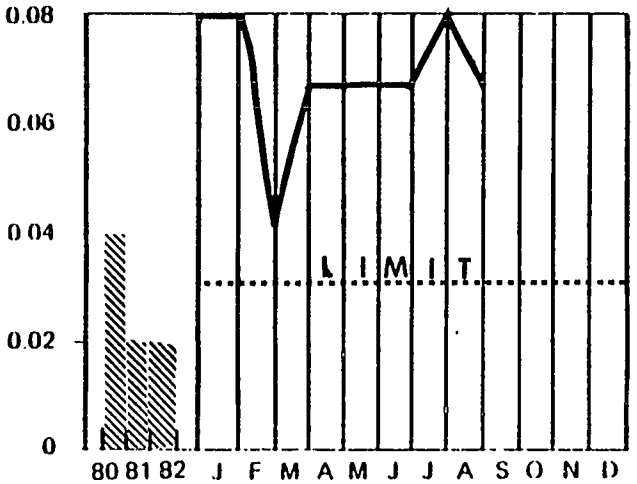
Two types of PCB's in air samples were taken during the removal of sediment from the ditch east of C-340: first were PCB's attached to the dust, and second, PCB's in the air. The PCB's attached to dust ranged from less than detectable to 0.05 mg/m^3. The PCB's in air were less than 0.01 mg/m^3, which is the lower detectable reporting limit. The TLV is 0.5 mg/m^3.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

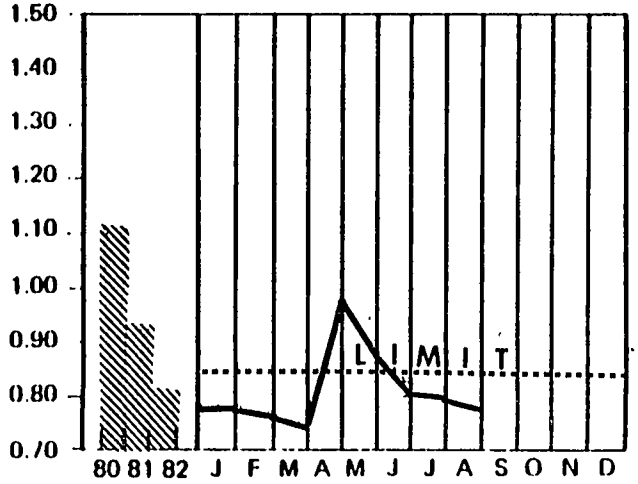
August 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.08		3	0.84	16	0.61		6	4.45	27	2.49	
ORNL	0	0.00	2	0.08		2	0.55	19	0.73		11	8.03	46	4.24	
OR Y-12	0	0.00	3	0.06		3	0.47	43	0.92		8	3.32	45	2.36	
PGDP	0	0.00	0	0.00		0	0.00	6	0.72		3	7.04	7	2.03	
UCC-ND	0	0.00	7	0.07	0.03	8	0.54	84	0.78	0.85	28	5.04	125	2.83	2.52

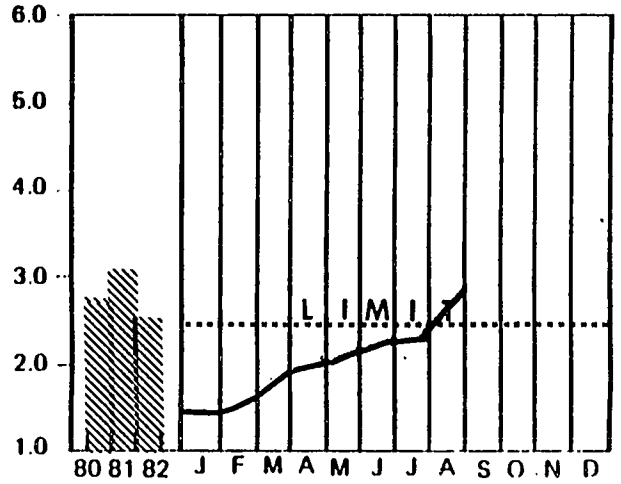
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE JOB DISABLING INJURY RATE



COMMENTS: An unusual number of off-the-job disabling injuries occurred during August. This experience, along with several late reported cases, results in the year to date disabling injury frequency rate exceeding the control limit.

RGJordan:cj
9/15/83

UNION CARBIDE CORPORATION - SAFETY SUMMARY — JULY 1983

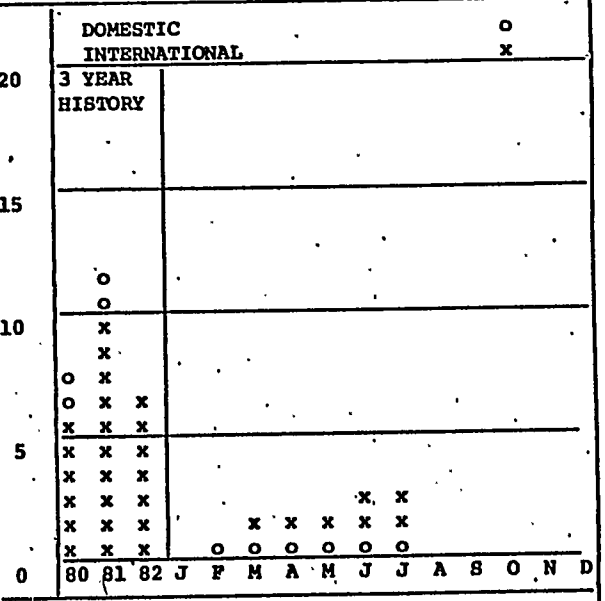
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Medical Products	0	0.00	0	0.00	4.90
General Departments	0	0.00	4	0.21	0.15
Eth. Oxide/Glycol	0	0.00	4	0.24	0.99
Polyolefins	0	0.00	7	0.45	0.85
Home & Automotive	1	0.55	9	0.58	0.96
Solv. & Coat. Mat.	1	0.43	13	0.72	0.92
Sil. & Urethane In.	2	1.05	10	0.72	1.02
Eth. Oxide Der.	1	2.95	2	0.84	0.40
Films-Packaging	3	1.30	13	0.85	1.39
Specialty Chemicals	1	1.08	6	0.91	0.93
Battery Products	1	0.33	30	0.92	1.00
Carbon Products	3	1.07	20	1.03	1.10
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	6	1.92	26	1.12	1.28
Spec. Poly. & Comp.	0	0.00	6	1.17	1.10
Electronics	7	1.55	36	1.20	0.94
Eng. & Hydro.	3	1.52	20	1.27	1.07
Linde	4	0.66	64	1.46	1.81
Agricultural Prod.	4	1.38	31	1.54	1.12
Engineering Prod.	4	2.10	25	1.65	2.24
Metals	2	1.87	33	4.37	2.80
SUBTOTAL DOMESTIC	43	0.96	359	1.07	
Nuclear	8	0.69	74	0.80	0.85
TOTAL DOMESTIC	51	0.90	433	1.01	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Battery Products	0	0.00	0	0.00	0.04	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
General Departments	0	0.00	1	0.05	0.07	0.57
Carbon Products	0	0.00	1	0.05	0.12	1.33
Home & Automotive	0	0.00	1	0.06	0.07	0.32
Eth. Oxide/Glycol	0	0.00	1	0.06	0.14	3.96
Electronics	1	0.22	2	0.07	0.08	1.37
Engineering Prod.	1	0.52	1	0.07	0.12	0.66
TOT. DOMESTIC LIMIT					0.09	
U.C. Canada Ltd.	1	0.32	2	0.09	0.18	1.46
Solv. & Coat. Mat.	0	0.00	2(1)	0.11	0.12	1.32
Eng. & Hydro.	1	0.51	2	0.13	0.08	7.21
Specialty Chemicals	0	0.00	1	0.15	0.08	5.14
Linde	1	0.17	8	0.18	0.19	5.76
Spec. Poly. & Comp.	0	0.00	1	0.19	0.10	2.14
Agricultural Prod.	1	0.34	5	0.25	0.14	4.37
Metals	0	0.00	5	0.66	0.28	26.78
SUBTOTAL DOMESTIC	6	0.13	33(1)	0.10		2.73
Nuclear	1	0.09	7	0.08	0.03	2.49
TOTAL DOMESTIC	7	0.12	40(1)	0.09	0.09	2.68

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.& Coat. Mat. - Fall from 40 feet
MAR. U.C. So. Africa - Crushed by elevator
JUNE U.C. Pan America - Buried in ore silo

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	5	0.33	41	0.39	0.74
U.C. Europe	4	0.73	18	0.40	0.42
UC. Africa Mid-East	2	1.00	7	0.49	0.80
U.C. Eastern	7	0.36	69	0.51	0.80
U.C. So. Africa	7	0.97	41	0.81	1.78
TOTAL INTERNATIONAL	25	0.51	176	0.50	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	1	0.02	0.06	1.23
U.C. Pan America	0	0.00	8(1)	0.08	0.10	3.80
U.C. Eastern	2	0.10	17	0.13	0.26	1.99
U.C. South Africa	2	0.28	13(1)	0.26	0.27	3.99
U.C. Africa Mid-East	1	0.50	5	0.35	0.48	2.81
TOTAL INTERNATIONAL	5	0.10	44(2)	0.13	0.19	2.76

*Fatalities shown in ( )

RECORDABLE INJURIES - ALL UCC

	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	76	0.72	609	0.78	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
TOTAL UCC	12	0.11	84(3)	0.11	0.14	2.72

July's total of 76 recordable injuries worldwide equalled the previous lowest monthly total of May. Compared with the same period in 1982, recordable injuries show a domestic reduction of 14%, an international reduction of 44% and a 25% reduction worldwide.

Injuries with days away from work show a 35% worldwide reduction from 1982 with two fewer fatalities. Domestic injuries with days away from work have, however, rapidly increased from an average of 4.8 cases per month in January-May to 7.5 cases per month in June-July. A continued effort will be required to reverse this trend.

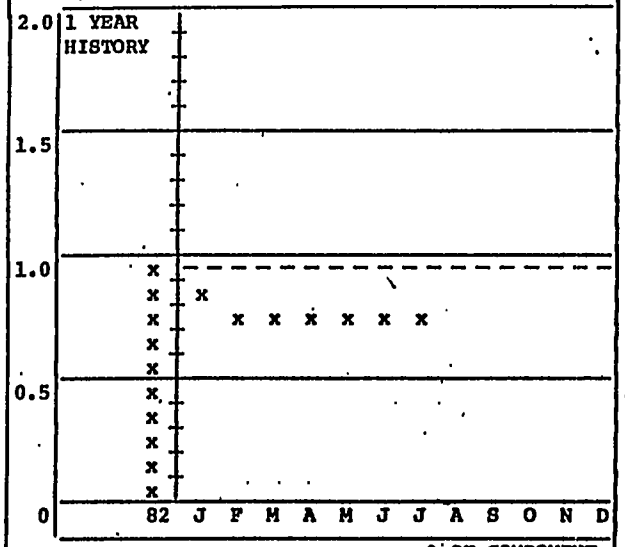
The off-the-job domestic disabling injury rate year-to-date is 22% less than the equivalent period in 1982 with 7 fewer fatalities.

Management attention to on- and off-the-job safety is getting results.

C. E. Eley

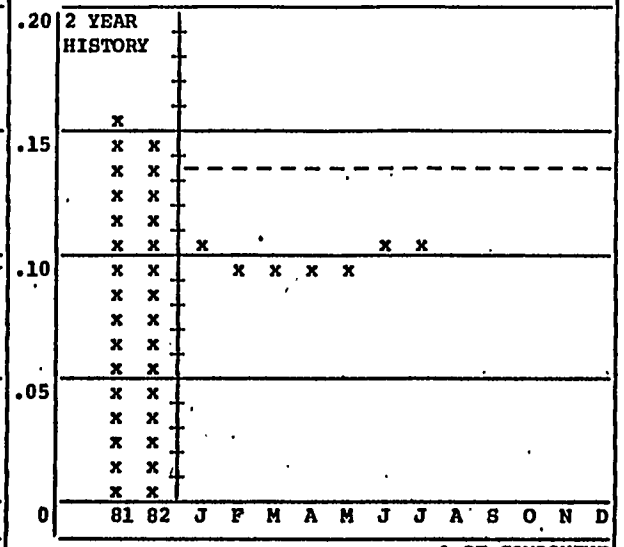
UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY — JULY 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	24
U.C. So. Africa	46
Polyolefins	53
U.C. Pan America	53
Home & Automotive	60
Films-Packaging	61
U.C. Africa Mid-East	61
U.C. Eastern	64
Silicones & Urethane Inter.	71
Engineering Products	74
Solvents & Coatings Materials	78
Linde	81
U.C. Canada Ltd.	88
Battery Products	92
Carbon Products	94
Nuclear	94
U.C. Europe	95
Specialty Chemicals	98
Specialty Polymers & Composites	106
Engineering & Hydrocarbons	119
Electronics	128
Agricultural Products	138
General Departments	140
Metals	156
Ethylene Oxide Derivatives	210

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Battery Products	0
Ethylene Oxide Derivatives	0
Films-Packaging	0
Medical Products	0
Polyolefins	0
Silicones & Urethane Inter.	0
U.C. Europe	33
Carbon Products	42
Ethylene Oxide/Glycol	43
U.C. Canada Ltd.	50
U.C. Eastern	50
Engineering Products	58
General Departments	71
U.C. Africa Mid-East	73
U.C. Pan America	80
Home & Automotive	86
Electronics	88
Solvents & Coatings Materials	92
Linde	95
U.C. So. Africa	96
Engineering & Hydrocarbons	163
Agricultural Products	179
Specialty Chemicals	188
Specialty Polymers & Composites	190
Metals	236
Nuclear	267

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	YTD FATALITIES
Medical Products	0	0.00	8.70	
Electronics	11	1.01	2.67	
Polyolefins	6	1.36	4.16	
General Departments	12	1.72	4.61	
Eth. Oxide Der.	2	2.23	3.20	
Nuclear	95	2.46	2.52	2
Spec. Poly. & Comp.	9	4.76	5.50	
Agricultural Products	36	5.08	5.90	
Battery Products	69	5.18	8.00	2
Specialty Chem.	13	5.37	6.00	
TOT. DOMESTIC LIMIT			5.40	
Linde	88	5.43	5.90	
Carbon Products	44	5.97	9.18	
Home & Automotive	38	6.22	6.12	
Films-Packaging	38	6.56	10.00	
Eth. Oxide/Glycol	39	6.57	6.40	
Metals	19	6.85	7.00	
Solvents & Coat. Mat.	47	7.03	3.94	
Sil. & Urethane Inter	37	7.22	9.00	1
U.C. Canada Ltd.	74	8.07	8.55	
Engineering Prod.	53	9.33	6.00	
Eng. & Hydro.	60	10.19	8.01	
TOTAL DOMESTIC	790	4.83	5.40	5

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	107	200
Battery Products	0	0	0
Carbon Products	0	55	240
Electronics	0	69	0
Eng. & Hydro.	0	18	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Linde	0	275	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	0	39	0
Polyolefins	0	8	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	55	0
U.C. Pan America	0	0	300
U.C. So. Africa	5	95	0
TOTAL UCC	5	1034	4363

Distribution:

H. H. Abee

R. C. Baker
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
H. I. Cobert
H. G. Coltharp
R. W. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal
R. H. Rucker, M.D.

M. Sanders
J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
W. E. Thompson
D. B. Trauger
C. W. Turok

C. W. Weber
J. C. White
R. D. Worrell
R. D. Williams

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

MONTHLY HIGHLIGHTS September 1983

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Total Residual Chlorine	1	99
ORGDP	pH, SS, Cr	18	95
Y-12	None	0	100
PGDP	pH	6	98

2. New Monitoring Weirs - ORNL

The new monitoring weirs for White Oak Lake, Melton Branch, and White Oak Creek became operational. The new weirs have been designed to give accurate flow readings over a wide range of flow conditions (up to 100 year storm flow).

3. Fire Safety Improvements to Hazardous Waste Storage Facility - ORNL

Significant improvements in the area of fire safety have been implemented at the current hazardous waste storage facility. These improvements will allow DEM personnel to continue operations in the present facility until the new facility is complete.

4. Silver Recovery Pilot Plant - ORNL

The process for removing cyanides, both free cyanide and cyanide complexes, became an operational part of the silver recovery system. A total of 12,200 gallons of photoreproduction wastes have been processed to this date.

5. Drainage Systems In ORNL Facilities at Y-12 - ORNL

Lockwood-Greene completed their work of verifying as-built conditions for all drainage systems in ORNL Facilities at Y-12.

6. Asbestos Removal - ORGDP

On September 14, 1983, Jim Goodpasture of the Tennessee Air Pollution Control Division visited the ORGDP to inspect the K-1501 steam plant and an asbestos removal project at K-1036. A tour of the steam plant was conducted by the facility engineer which included boilers during an overhaul and the electric static precipitators. A tour of the K-1036 building was also provided to allow inspection of asbestos handling during the removal program.

All aspects of the inspection were in satisfactory condition with no recommendations being made by the State Inspector.

7. Scrap Metal Yard - ORGDP

Quadrex Corporation, in conjunction with Southern Metals and Alloy of Rockwood, Tennessee, has been awarded a subcontract to process, by sorting and size reducing, approximately 29,000 tons of scrap metal currently located in above-ground storage at the ORGDP steam plant contaminated metal storage yard.

The primary object of this subcontract, which will last 14-16 months, is to sort the various metals by type (ferrous, non-ferrous, non-processable, trash, etc.). The major metal type is carbon steel, which will be reduced by mechanical shearing to a size compatible to melting and ingot casting at a future date. The melting/ingot casting phase of this work will be by another subcontract award in early FY '85.

8. Kentucky Environmental Conference - PGDP

The 8th Annual Kentucky Environmental Conference was held in Paducah during September. The seminar, which was attended by both industry and State personnel, included tours of the PGDP and panel discussions covering topics such as acid rain, solid waste management, ground water issues, and environmental response.

9. DOE Appraisal - PGDP

The DOE Environmental Protection Branch performed the annual appraisal of PGDP Environmental Management Program during the week of September 19-23. In general, they were pleased with the performance of the Environmental Program and found no major deficiencies. It was indicated that solutions to the 1982 recommendation was progressing to their satisfaction.

10. Summary of September Activities - Y-12

In September, a major effort lead to the completion of the report of storm drainage effluents to the Upper East Fork Poplar Creek (UEFPC). The report was submitted to DOE-ORO and in turn to the Tennessee Department of Health and Environment (TDHE) in compliance with the Memorandum of Understanding (MOU) with the Environmental Protection Agency (EPA) and the TDHE. This report represented a coordinated investigation which included sampling, analysis, process review, and data evaluation and correlation.

On September 14, DOE-ORO and Y-12 personnel met with the EPA in Atlanta to review a schedule revision for the submittal of several objectives under the MOU. Following the accord reached at this meeting, the Commissioner of the TDHE issued a Complaint and Order on September 15. This action gives the agreed upon commitments the binding force of law, and the TDHE the enforcement authority to see that the objectives are met.

11. Pollution Elimination Action - Y-12

The disposal in the burial grounds of all oil-water sludge from coolant-biodegradation facility has ceased. A process has been developed using steam heated drying beds and pyrolysis to accomplish dewatering and chemical composition changes. This will reduce

the final quantities to be disposed by a factor of twenty, and detoxify the final sludge product which will be suitable for burying.

Effective October 1, the Y-12 Laundry will cease clothes washing and drying, which will be done at ORGDP. This action will result in the elimination of six million gallons of laundry water carrying 32 tons of detergents and chemicals which previously went to East Fork Poplar Creek.

12. Closeout of S-3 Ponds - Y-12

This process continues with the neutralization of the northwest pond. Neutralization required 454 tons of calcium carbonate, 87 tons of lime, and 12,000 gallons of acetic acid. The biological denitrification has begun with the addition of the bacteria, which are multiplying rapidly as they treat the pond water.

The three 500,000 gallon tanks' construction is well along on the west end of the Plant. These tanks will be used for storage and treatment of wastes which will be first transported to and treated at ORGDP. In preparation for this program, a computer recordkeeping system has been created to track the status of each waste solution shipment.

13. Meetings, Tours, and Briefings - Y-12

On September 16, DOE and Y-12 Plant personnel met with EPA in Chattanooga to discuss procedures for defining and exempting solid wastes as hazardous waste materials.

On September 22, a follow-up meeting was held with TDHE officials in their Knoxville office to discuss commitments under the Commissioner's Complaint and Order.

On September 22, two officials from DOE Headquarters Nuclear Safety Department were given a tour of all facilities subject to the MOU and the Complaint and Order.

On August 26, Mr. Nelson Milder, Staff Member of the Energy Research and Production Subcommittee, House Science and Technology Committee, was given a briefing of the areas mentioned in the Memorandum of Understanding. Accompanying Mr. Milder was Mr. W. R. Bibb, Acting Assistant Manager for Safety and Environment, DOE-ORO.

INDUSTRIAL HYGIENE

1. Industrial Hygienist Chosen As Instructor For Quality Improvement Training - ORGDP

Vickie Tharpe is one of six ORGDP employees selected to teach in the Plant Quality Improvement Training Program. This training is designed to better equip employees with statistical tools for plant-wide quality improvement.

2. Reduction of Designated Respirator Wearers - ORGDP

Plant Divisions were asked to reduce the number of designated respirator wearers, as appropriate, based on criteria provided by the Industrial Hygiene Department. The results were a 16% reduction of respirator wearers from 1,791 to 1,497.

3. Results of Special 12-Hour Fluoride Samples - Y-12

From July 19 to July 22, six sets of special 12-hour fluoride samples were taken at the eleven Y-12 ambient air monitoring stations to evaluate the impact of the simultaneous operation of the fluid bed conversion units in Buildings 9206 and 9212. The maximum fluoride (as HF) concentration was 0.61 micrograms/M^3, well below the State of Tennessee Ambient Air Standard for a 12-hour sample of 3.7 micrograms/M^3.

4. Monitoring of Clean-Up Activities in Alpha 4 Expanded - Y-12

An Industrial Hygiene technician is now stationed at Building 9201-4 to execute a special air sampling plan while clean-up activities are under way. The air sampling plan includes 8-hour time-weighted-average samples, Jerome mercury vapor monitors placed at fixed locations, and walk-through surveys at least twice each day.

5. Respirator Training - PGDP

During the month, 35 people attended respirator training. The classes will continue for those employees needing respirator training.

6. Respirator Equipment Inspection - PGDP

A spot check of respirator equipment was made of various overhead cranes throughout the Cascade. The only deficiency noted was out-of-date canisters. During routine monthly inspection of respirator equipment for emergency use, emphasis should be placed on expiration dates of canisters and facepieces.

7. Air Sampling Program - PGDP

A. Air samples were taken for PCB's during the drumming of the dirt from the ditch east of the plant. This operation at C-615 drying bed lasted approximately two weeks. Air samples were taken for PCB's in the gaseous form and also PCB's attached to the dirt in the dust form. The levels found during this operation were < 0.1 mg/m^3 in both the gaseous and dust forms.

B. Air sampling was done during the testing of the degreasing solvent super-solv which contains toluene, 1,1,1-trichloroethane, trichloroethylene, and perchloroethylene. Long-term air samples were taken with charcoal tubes and short-term samples were taken with detector tubes. The long-term samples all showed < .1 of the TLV on each contaminant but the short-term samples (approximately 1 minute) showed 1/2 TLV for toluene; < .2-3 times the TLV for 1,1,1 trichloroethane; and 1/7 the TLV for trichlorethylene. Noise was also a problem when using the ultrasonic cleaner showing noise levels from 83-89 dBA. Hearing protection was recommended when using the ultrasonic cleaner.

C. Several air samples were taken in C-333 and C-720-C for diazinon after these areas had been sprayed. All levels showed up less than 0.005 mg/m^3 which is 1/20 of the TLV of 0.1 mg/m^3.

HEALTH PHYSICS

1. Contamination From Broken Promethium-147 Source - Y-12 Plant

A fused-in-glass source of promethium-147 was dropped in a room in the Development area (Building 9203) on September 1 resulting in extensive contamination of the room. No significant airborne concentrations of radioactive material were detected and preliminary survey results indicated that contamination in the room was limited almost entirely to the floor.

Urinalyses and body counts were performed on several of the people involved in this incident and no significant results were observed.

2. Changehouse Personnel Relocation - Y-12

All access routes to the "clean" side of the Building 9998 changehouse were through regulated zones (zones with floor contamination over 25/d/min/100 cm^2 - alpha, and/or over 120 d/min/100 cm^2 - beta). Since it was not feasible from an engineering or cost effective standpoint to modify the changehouse or provide a "clean" corridor, it was decided to discontinue use of the changehouse. Necessary available space was found in two other changehouses in the same general work area. The changehouse in Building 9998 is no longer in use.

3. Body Counts for MAA New Hires - Y-12

New hires with job assignments in Material Access Areas (MAA's) are being asked to report to the in vivo radiation laboratory for a body count prior to reporting to the assigned workplace beginning September 19. This new procedure provides special data for personnel with no prior exposure to radioactive materials against which the in vivo spectra of Y-12 uranium workers can be compared. It will also provide baseline spectra for new workers entering the MAA's. A special orientation segment has been developed to acquaint these employees with the in vivo program prior to their body count.

4. Chip Fire - Y-12

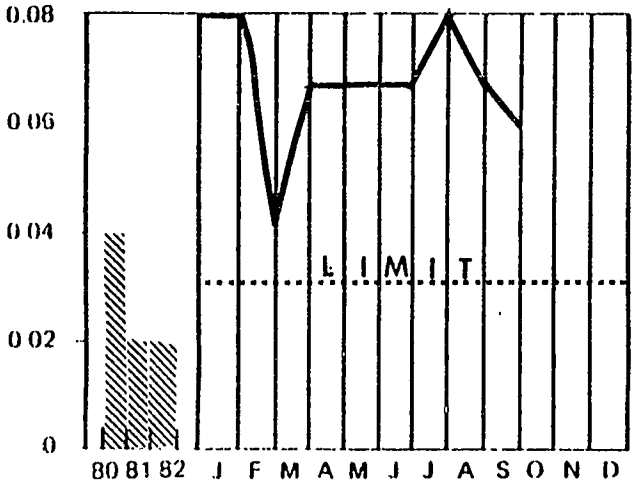
A depleted uranium chip fire in a dumpster on Dock 18, Building 9215 exposed five Rust personnel working on the roof above the dock to smoke from the fire. The incident occurred August 31. Analytical results on urine samples submitted by these individuals indicated no significant internal exposure to uranium as a result of the fire.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

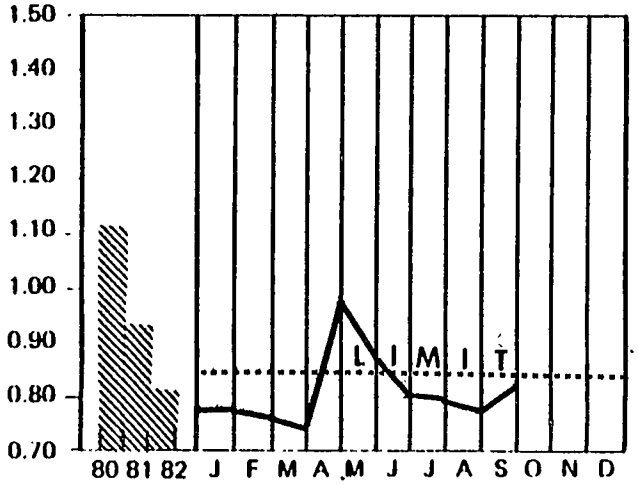
September 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.07		2	0.60	18	0.61		5	3.69	34	2.79	
ORNL	0	0.00	2	0.07		2	0.60	21	0.71		5	3.68	51	4.17	
OR Y-12	0	0.00	3	0.06		11	1.85	54	1.03		3	1.24	48	2.23	
PGDP	0	0.00	0	0.00		2	1.98	8	0.86		1	2.37	8	2.07	
UCC-ND	0	0.00	7	0.06	0.03	17	1.25	101	0.84	0.85	14	2.52	141	2.83	2.52

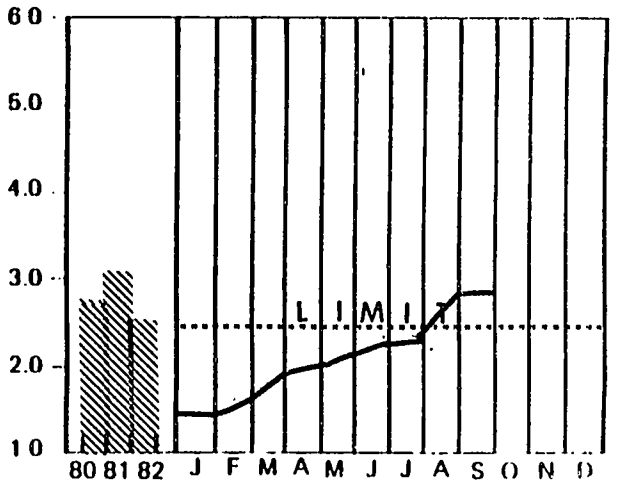
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE JOB DISABLING INJURY RATE



COMMENTS: The seventeen recordable injuries reported during September results in a year-to-date rate only slightly under our limit of 0.85. Attention to safe work practices, safety awareness and/or attitude must be emphasized.

RGJordan:cj
10/14/83

UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

AUGUST 1983

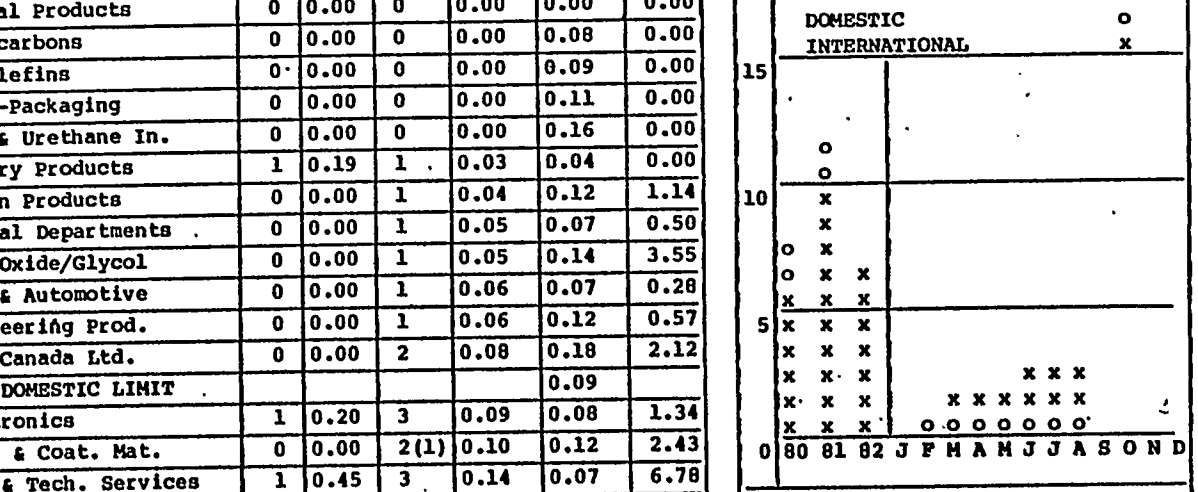
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Medical Products	0	0.00	0	✓ 0.00	4.90
General Departments	0	0.00	5	✓ 0.23	0.15
Eth. Oxide/Glycol	2	1.02	6	✓ 0.32	0.99
Polyolefins	1	0.47	8	✓ 0.46	0.85
Home & Automotive	1	0.40	10	✓ 0.56	0.96
Eth. Oxide Der.	0	0.00	2	✓ 0.74	0.40
Solv. & Coat. Mat.	3	1.50	16	✓ 0.79	0.92
Films-Packaging	1	0.45	14	✓ 0.79	1.39
Specialty Chemicals	0	0.00	5	✓ 0.80	0.93
Hydrocarbons	0	0.00	1	✓ 0.81	1.07
Sil. & Urethane In.	3	1.52	13	✓ 0.82	1.02
Battery Products	7	1.34	37	0.98	1.00
Carbon Products	3	0.92	23	1.01	1.10
Spec. Poly. & Comp.	0	0.00	6	1.01	1.10
Eng. & Tech. Services	2	0.89	22	1.03	0.94
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	1	0.31	28	1.06	1.28
Electronics	5	1.01	41	1.17	0.94
Linde	10	1.59	74	1.48	1.81
Agricultural Products	4	1.35	35	1.51	1.12
Engineering Prod.	6	2.60	31	1.78	2.24
Metals	0	0.00	33	3.84	2.80
SUBTOTAL DOMESTIC	49	1.00	410	1.05	
Nuclear	8	0.54	82	0.76	0.85
TOTAL DOMESTIC	57	0.89	492	0.99	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Hydrocarbons	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Sil. & Urethane In.	0	0.00	0	0.00	0.16	0.00
Battery Products	1	0.19	1	0.03	0.04	0.00
Carbon Products	0	0.00	1	0.04	0.12	1.14
General Departments	0	0.00	1	0.05	0.07	0.50
Eth. Oxide/Glycol	0	0.00	1	0.05	0.14	3.55
Home & Automotive	0	0.00	1	0.06	0.07	0.28
Engineering Prod.	0	0.00	1	0.06	0.12	0.57
U.C. Canada Ltd.	0	0.00	2	0.08	0.18	2.12
TOT. DOMESTIC LIMIT					0.09	
Electronics	1	0.20	3	0.09	0.08	1.34
Solv. & Coat. Mat.	0	0.00	2(1)	0.10	0.12	2.43
Eng. & Tech. Services	1	0.45	3	0.14	0.07	6.78
Specialty Chemicals	0	0.00	1	0.16	0.08	5.41
Linde	0	0.00	8	0.16	0.19	5.24
Spec. Poly. & Comp.	0	0.00	1	0.17	0.10	1.86
Agricultural Prod.	1	0.34	6	0.26	0.14	4.07
Metals	0	0.00	5	0.58	0.28	22.94
SUBTOTAL DOMESTIC	4	0.08	37(1)	0.10		2.60
Nuclear	0	0.00	7	0.07	0.03	2.63
TOTAL DOMESTIC	4	0.06	44(1)	0.09	0.09	2.61

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet

MAR. U.C. So Africa-Crushed by elevator

JUNE U.C. Pan America-Buried in ore silo

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	4	0.26	45	0.37	0.74
U.C. Europe	2	0.38	20	0.40	0.42
U.C. Eastern	16	0.81	79	0.51	0.80
U.C. Africa Mid-East	2	0.94	9	0.55	0.80
U.C. So. Africa	6	0.83	47	0.81	1.78
TOTAL INTERNATIONAL	30	0.60	200	0.50	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	LIMIT	SEV.
U.C. Europe	0	0.00	1	0.02	0.06	1.10
U.C. Pan America	1	0.06	9(1)	0.07	0.10	3.69
U.C. Eastern	3	0.15	20	0.13	0.26	1.59
U.C. So. Africa	1	0.14	15(1)	0.26	0.27	4.76
U.C. Africa Mid-East	2	0.94	8	0.49	0.48	2.57
TOTAL INTERNATIONAL	7	0.14	53(2)	0.13	0.19	2.67

RECORDABLE INJURIES - ALL UCC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	87	0.77	692	0.77	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	LIMIT	SEV.
TOTAL UCC	11	0.10	97(3)	0.11	0.14	2.64

*Fatalities shown in ( )

COMMENTS:

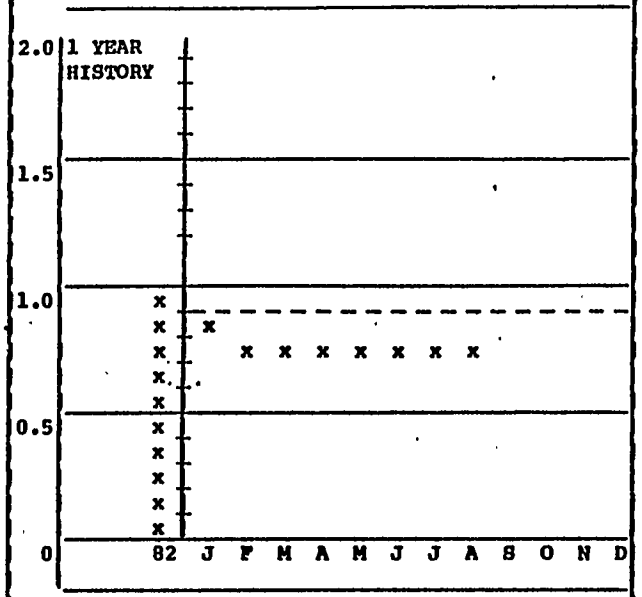
The year-to-date rate for domestic recordable injuries went below the 1.00 mark for the first time in our history. The rate now stands at 0.99 compared to our domestic limit of 1.05. There have been 492 domestic recordable injuries in 1983 compared to 567 for the first eight months of 1982.

Injuries with days away from work for all UCC totalled 97 at the end of August compared to 148 for the first eight months of 1982.

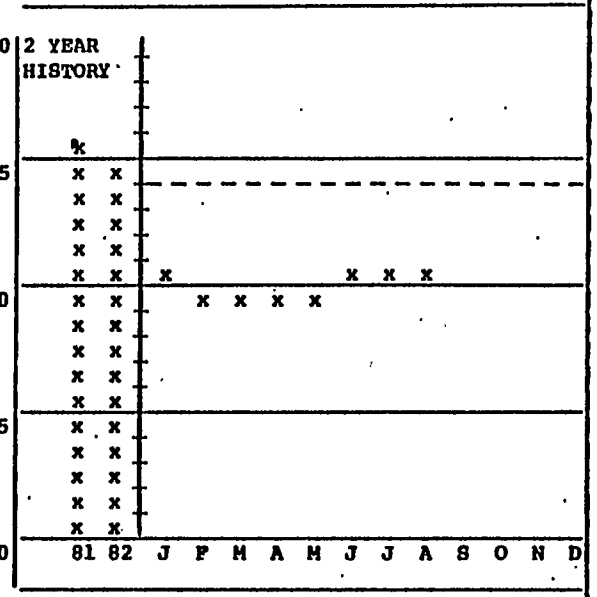
The off-the-job disabling injury rate has risen every month this year. At 5.27, it is still better than last year's eight month rate of 6.16, but it is getting very close to the limit of 5.40.

C.E. ELEY

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	32
U.C. So. Africa	46
U.C. Pan America	50
Polyolefins	54
Films-Packaging	57
Home & Automotive	58
U.C. Eastern	64
U.C. Africa Mid-East	69
Hydrocarbons	76
Engineering Products	79
Silicones & Urethane Inter.	80
Linde	82
U.C. Canada Ltd.	83
Solvents & Coatings Materials	86
Specialty Chemicals	86
Nuclear	89
Carbon Products	92
Specialty Polymers & Composites	92
U.C. Europe	95
Eng. & Tech. Services	96
Battery Products	98
Electronics	124
Agricultural Products	135
Metals	137
General Departments	153
Ethylene Oxide Derivatives	185

	% OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Films-Packaging	0
Hydrocarbons	0
Medical Products	0
Polyolefins	0
Silicones & Urethane Inter.	0
Carbon Products	33
U.C. Europe	33
Ethylene Oxide/Glycol	36
U.C. Canada Ltd.	44
Engineering Products	50
U.C. Eastern	50
U.C. Pan America	70
General Departments	71
Battery Products	75
Solvents & Coatings Materials	83
Linde	84
Home & Automotive	86
U.C. So. Africa	96
U.C. Africa Mid-East	102
Electronics	113
Specialty Polymers & Composites	170
Eng. & Tech. Services	175
Agricultural Products	186
Specialty Chemicals	200
Metals	207
Nuclear	233

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	YTD LIMIT	YTD FATALITIES
Medical Products	0	0.00	8.70	
Electronics	16	1.26	2.67	
Polyolefins	7	1.39	4.16	
General Departments	14	1.77	4.61	
Eth. Oxide Der.	2	1.96	3.20	
Hydrocarbons	1	2.26	8.01	
Nuclear	125	2.83	2.52	2
Spec. Poly. & Comp.	10	4.62	5.50	
TOT. DOMESTIC LIMIT			5.40	
Agricultural Products	45	5.56	5.90	
Battery Products	87	5.70	8.00	2
Linde	108	5.84	5.90	
Home & Automotive	46	6.58	6.12	
Carbon Products	57	6.70	9.18	
Films-Packaging	45	6.80	10.00	
Metals	22	6.92	7.00	
Sil. & Urethane Inter	42	7.20	9.00	1
Specialty Chem.	17	7.32	6.00	
Eth. Oxide/Glycol	49	7.37	6.40	
U.C. Canada Ltd.	84	8.00	8.55	
Solvents & Coat. Mat.	66	8.82	3.94	
Eng. & Tech. Services	80	10.11	7.36	
Engineering Prod.	67	10.30	6.00	
TOTAL DOMESTIC	990	5.27	5.40	5

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	107	200
Battery Products	0	0	0
Carbon Products	0	55	240
Electronics	0	69	0
Eng. & Tech. Services	0	0	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Hydrocarbons	0	18	0
Linde	0	275	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	0	60	0
Polyolefins	0	8	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	0	500
U.C. Eastern	0	0	0
U.C. Europe	0	32	0
U.C. Pan America	0	0	300
U.C. So. Africa	0	95	0
TOTAL UCC	0	1032	4363

Distribution:

H. H. Abee

R. C. Baker/H. G. Coltharp
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
R. W. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards/W. E. Thompson

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher
C. A. Grametbauer

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal

M. Sanders
J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
D. B. Trauger
C. W. Turok/R. H. Rucker, M.D.

C. W. Weber
J. C. White
R. D. Williams
R. D. Worrell

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

✓File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Total Residual Chlorine	1	99
ORGDP	pH	4	99
Y-12	None	0	100
PGDP	pH	1	99

2. Nuclear Power Plant Emergency Exercise Participation - ORNL

Personnel from the Radiation and Safety Surveys and Environmental Management Departments participated in a radiological emergency exercise with DOE and Commonwealth of Virginia officials at Surry Nuclear Power Plant.

3. Pesticide Spill - ORGDP

Friday, October 14, 1983, a spill of the pesticide Diazinon occurred on the road between the K-33 bridge and the K-1030 building. The Janitorial Department was transporting the pesticide when the spill occurred, releasing approximately three quarts of 45 percent Diazinon onto the road surface. This spill was reported to DOE and, subsequently, to the Coast Guard National Response Center. After contacting the manufacturer, a strong bleach solution was utilized in an effort to clean up the spill.

4. Groundwater Seminar - PGDP

A representative of PGDP's Environmental Control Department attended Geraghty and Miller's "Fundamentals of Groundwater Quality Protection" seminar in Denver, Colorado. The seminar was designed to familiarize individuals with mechanisms of groundwater contamination as well as monitoring and investigating procedures. Special attention was paid to practical approaches to a variety of contamination investigations and clean-ups.

5. UF_6 Release - PGDP

A release of approximately 1.5 kilograms of UF_6 occurred on October 18, 1983, from the C-310 purge vent. The release was reported to the DOE who, in turn, reported it to the EPA under the provisions of CERCLA. No cause for the release has been determined.

6. Tours and Briefings - Y-12

On September 28, a tour and briefing of the areas mentioned in the Memorandum of Understanding was given to T. Phlaum, DOE Headquarters Office of Emergency Preparedness.

On October 12, C. V. Pietrosequicz, Jr., D. L. Rowley, R. L. Kay, J. W. Neese, Center for Disease Control, Atlanta, Georgia; G. E. Ingram, Tennessee Department of Health and Environment, Nashville; and W. H. McDaniel, Environmental Protection Agency, Athens, Georgia, were given a tour and briefing of waste disposal facilities and an unclassified visit to the Alpha-4 building.

7. Perk Air Sampling Program - Y-12

Air sampling was started September 29 to determine concentrations of perchloroethylene in the ambient air around Y-12. Three of the eleven environmental air stations are being used to assess the balance of perchloroethylene in the Plant environment.

8. Steam Plant Liquid Effluent Discharge Characterization Started - Y-12

Six 24-hour composite samplers have been placed around the Y-12 steam plant to characterize the liquid effluent discharges attributable to steam plant operations. When completed, this information will be used to apply for new NPDES discharge permits from the State of Tennessee.

9. Fish Kill Investigation - Y-12

At 9:00 a.m. on October 20, fifteen dead fish were found below the New Hope Pond weir for a distance of approximately 50 yards. Many live fish were also present. A complete investigation is under way. However, it now appears that the affected fish were killed while in New Hope Pond on October 18 by a low pH condition (2.6 at the inlet) that apparently resulted from the discharge of sulphuric acid back-wash solution from the steam plant and the Building 9204-18 water demineralizer facility. The pH value at the inlet to New Hope Pond remained below 6.0 from 10:45 a.m. to 12:45 p.m. on October 18. The lowest pH value at the outlet to New Hope Pond during this time period was 6.7.

10. Summary of October Activities - Y-12

During the month of October a number of documents have been submitted to the DOE for their review or in compliance with the Memorandum of Understanding on the Tennessee Department of Health and Environment (TDHE) Commissioners Complaint and Order (C&O).

a. "Sampling Plan for Y-12 Plant Effluents" (C&O)

b. "Implementation Schedule for Report on Site Suitability and Management Practices of Chestnut Ridge Classified Burial Ground" (C&O)

c. "Closure Plan for No. 1 Sanitary Landfill"

d. "Plan to Process and Discharge Mercury Contaminated Wastes from Building 9201-4, Y-12 Plant"

e. "Characterization of Waste Water from Y-12 Burial Ground Oil Ponds and NPDES Applications for Discharge" (MOU)

f. "Y-12 Plant Temporary Storage Facility for Low-Level Radioactive Solid Waste"

On October 13, 1983, DOE Environmental Protection and Y-12 Environmental Affairs personnel met with staff members of TDHE responsible for air pollution control. The discussion centered on emissions of volatile organics from the M-Wing Machine Shop. Y-12 has several air pollution permits which must be renewed; the discussion of these sources identified other possible sources which should be permitted.

Towards that goal, a training/orientation session was conducted with division representatives to enlist their support in identifying previously unpermitted, modified or shutdown air emission sources. They will be reporting their findings in November.

INDUSTRIAL HYGIENE

1. Technical Assistance to Other DOE Contractors - ORNL

Two ORNL staff members recently provided technical assistance in workplace monitoring and evaluation to the Morgantown Energy Technology Center, located at Morgantown, West Virginia and operated by DOE. This work was in connection with the Fossil Energy Environment, Safety, and Health Project for the Energy Centers.

2. Conference Participation - ORNL

During September and October technical papers were presented by ORNL staff members at the following meetings:

Third Annual Joint Utah Conference on Industrial Hygiene and Safety - Monitoring LDB Concentrations in Cooling Tower Waters

Annual Technical Meeting of the Tennessee Valley Sec. of AIHA - Employee Asbestos Hazards and Controls for Dust

Eighth International Symposium on PNA's - Industrial Hygiene Monitoring for Employees Exposure and Control Measures in ORNL Coal Technology Program

3. Supplied Air Suit Evaluation - ORNL

The ORNL Supplied Air Suit has been evaluated by the DOE Contractors Respirator Advisory Committee and approval for use has been given by DOE.

4. Training Activity - ORNL

A video tape for training employees in the function and use of the Savannah River Plant Supplied Air Suit has been completed and is being reviewed. This training aid will compliment the current program for employees using the plastic air suit. The tape is approximately 17 minutes in length.

5. Cylinder Hook-Up Operation Incident Investigation - Y-12

On September 13, a Metal Prep employee was sprayed with pressurized toluene diisocyanate during a cylinder hook-up operation. The employee was tranferred to Medical for treatment. Industrial Hygiene flagged off the area and took air samples which were found to be 26 times the threshold limit value of 0.04 mg/M^3. Industrial Hygiene recommended appropriate personnel protection for the cleanup and participated in a formal investigation of the incident with representatives from Metal Prep and the Industrial Safety Department.

6. Perk Spill In Beta-2E Investigated - Y-12

A perchloroethylene spill occurred on September 29 in the Building 9204-2E Cleaning area. The immediate area was evacuated and air samples were taken. The results were 150 ppm at the spill; the threshold limit value (TLV) for airborne perchloroethylene is 50 ppm. Only personnel involved in the cleanup operation, equipped with proper respiratory protection, were allowed in the area where the TLV was exceeded. Investigation revealed that the spill resulted when a Tygon hose connected to the perchloroethylene tank in a degreaser developed a hole due to the high temperature of the degreaser. The hose has been replaced by a flexible metallic hose.

7. Mercury Levels Continue To Be Extremely Low in Building 9201-4 - Y-12

Building 9201-4 airborne mercury levels are continuing to be extremely low. Prior to May of this year, before major cleanup activity, the average reading was approximately 0.004 mg/M^3. Increased ventilation has helped keep levels low even during cleanup operations. The last results for 19 of 24 charcoal tube samples were less than 0.001 mg/M^3. None were greater than 0.005 mg/M^3.

8. Selenium Rectifier Fire Investigated - Y-12

On October 20, a selenium rectifier was involved in a fire on the first floor of Building 9204-2. Industrial Hygiene recommended a light washdown of the area and equipment. As an extra precaution, the Fire Department personnel involved were advised to damp-wipe their equipment and to change clothes and shower since they had been in the heavy smoke. A follow-up safety meeting with the fire personnel was held to address questions and concerns.

9. Respiratory Protection Classes - PGDP

During October, 22 people attended classes in respiratory protection. Two types of presentations are now being offered. One presentation is designed for training respirator users in proper use and limitations of respirators. The second presentation covers a broader area of information based more on evaluating work areas for respiratory protection.

10. Cafeteria Inspection - PGDP

The cafeteria was inspected during October. The PGDP cafeteria received a rating of 93 out of 100. Kentucky Department of Health guidelines are being used to evaluate the cafeteria area.

11. Laundry Facilities Evaluated - PGDP

Laundry facilities at PGDP were evaluated during October. The loading levels of washing machines and dryers were especially checked and found to be satisfactory. The overall system reviewed was shown to be quite adequate from an Industrial Hygiene viewpoint.

12. PCB Contamination Investigation - PGDP

Extensive soil sampling was done around C-611 transformers to determine extent of contamination and to define the areas that needed to be cleaned up prior to transformer replacement. Maps were drawn up to mark exactly where the samples were taken and the estimated depth of contamination. Sample results ranged from <5 ppm to 37,000 ppm PCB's. The areas to be excavated should yield approximately 60 drums of PCB contaminated material. The excavation and completion of the project should be complete by November 11, 1983, which is before subcontractor work begins.

13. Air Sampling for Fiberglass - PGDP

Air samples to evaluate potential fiberglass exposure were taken around subcontractors working on the C-720 building replacing two air conditioning units and some ducts between the office ceiling and building roof. An updraft was present when the building roof was open and the personnel working were provided 3M 8710 respirators for use during the job. Sample results have not been received at this time. After the first two days on the job, almost all loose materials was swept out of the area due to the updraft.

HEALTH PHYSICS

1. Health Physics Audit by ND Radiological Protection Committee Completed - Y-12

The UCC-ND Radiological Protection Committee completed an audit of Y-12's Health Physics program. The Committee will perform similar audits, conforming to requirements of DOE Order OR 5482.1A, at all Nuclear Division facilities before the end of CY 1983. Such audits will be conducted periodically thereafter in response to DOE recommendations that each facility implement an internal audit system at the operating level which is clearly defined and auditable.

2. Headhouse Filter Change and Repair Investigation - Y-12

Because of deviation from normal contamination control procedures, urinalyses and *in vivo* monitoring were performed for twelve Y-12 employees involved in a changeout and repair of a filter and holder in Building 9212. Results of the measurements indicated no significant internal exposure to any of the employees.

3. Stack Release Investigation - Y-12

Two Lockwood Greene engineers and a member of the Y-12 Engineering staff were exposed to effluent from the H-1 Foundry as a result of a release from a stack on the roof of Building 9998 on October 4, 1983. All were monitored for internally deposited radionuclides. Urinalysis indicated a slightly elevated but highly

transient uranium exposure in two individuals. In vivo analyses showed virtually no deposition of either uranium or beta-emitting decay products in the lungs of these workers. No results were in excess of the Radiation Protection Standards, and internal exposures as a result of the incident are judged to be essentially nil.

Surveys of the residences of two of these persons showed no evidence of contamination, other than the clothing worn; a small amount of contamination was found and cleaned from the automobile of one person. An Unusual Occurrence Report has been submitted.

4. H-1 Foundry Worker Skin Exposure Exceeds DOE Quarterly Limit - Y-12

Results of analysis of a thermoluminescent dosimeter (TLD) assigned to an H-1 Foundry worker indicated a nonpenetrating (skin) exposure of 4,940 mrem for the month of September. When added to his exposure levels for July and August, this employee's third-quarter exposure exceeds the DOE quarterly limit of 5,000 mrem. The employee has been reassigned to work with low radiation exposure potential, and a committee has been formed to investigate the incident.

5. Contamination Cleanup from Broken Promethium-147 Source Completed - Y-12

Cleanup of the floor of a room in the Development area (Building 9203) that sustained contamination on September 1 when a promethium-147 source was dropped has been described in an Unusual Occurrence Report (UOR Number UCC-ND 83-29 -- Y-12 83-17).

CRITICALITY SAFETY

Presentation to NRC on Shipping Container UT-14A - Y-12

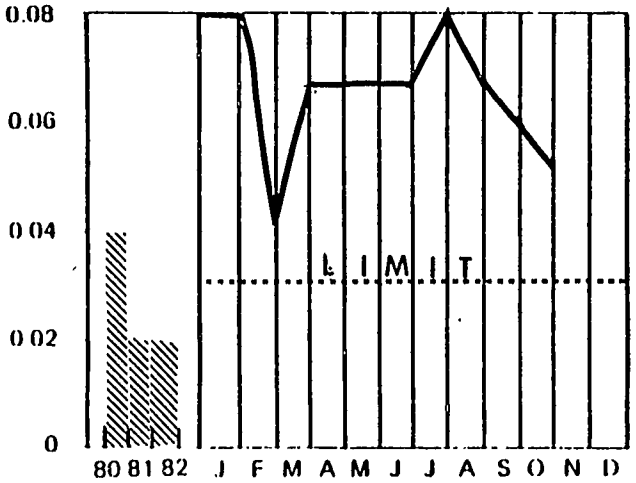
Information on the features of a prototype DT-14A fissile material shipping container for general use packaging was presented to Nuclear Regulatory Commission (NRC) personnel by representatives from DOE-ORO, Y-12 Container Engineering, and Y-12 Criticality Safety on September 22 in Silver Springs, Maryland. An advance draft Safety Analysis Report for Packaging (SARP) was provided for informal NRC review. Concerns will be resolved in light of NRC requirements and the draft SARP revised accordingly for use. The SARP will be used by the Department of Energy in its submittal to the NRC for a Certificate of Compliance for the DT-14A container.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

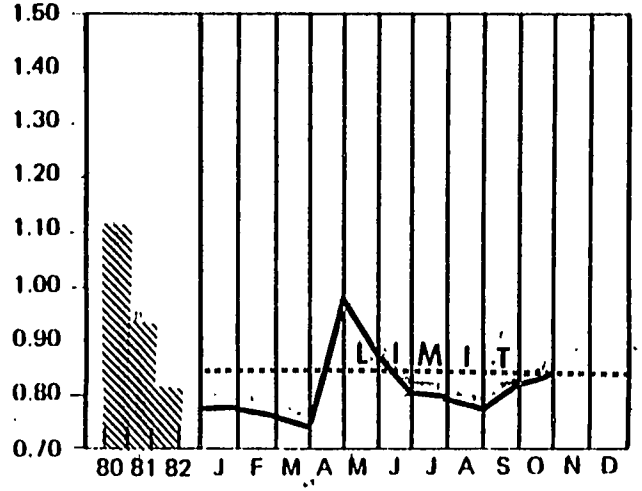
October 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.06		0	0.00	18	0.55		5	3.71	39	2.88	
ORNL	0	0.00	2	0.06		0	0.00	21	0.64		3	2.20	54	3.98	
OR Y-12	0	0.00	3	0.05		11	1.84	65	1.11		10	4.13	58	2.43	
PGDP	0	0.00	0	0.00		2	1.95	10	0.97		0	0.00	9	2.10	
UCC-ND	0	0.00	7	0.05	0.03	13	0.95	114	0.85	0.85	18	3.24	160	2.89	2.52

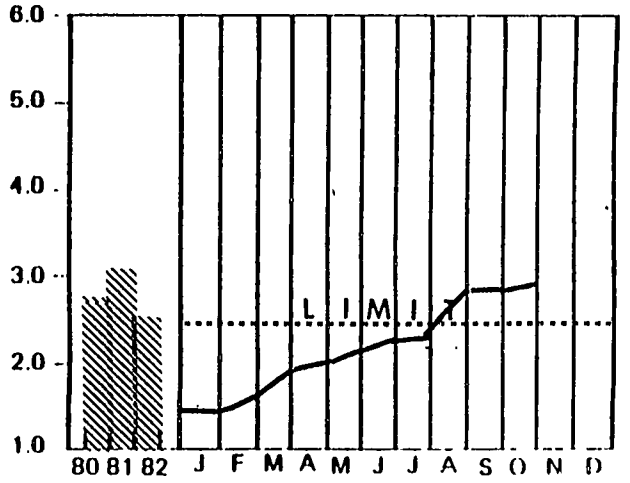
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE-JOB DISABLING INJURY RATE



COMMENTS: Off-The-Job Disabling Injuries continue to be an area of major concern. Eighteen injuries, including one fatality, occurred during the month.

RGJordan:cj
11/15/83

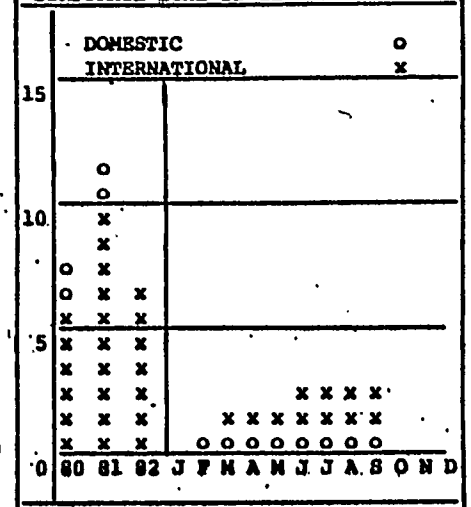
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
Medical Products	0	0.00	0	0.00	4.90
General Departments	0	0.00	5	0.20	0.15
Eth. Oxide/Glycol	1	0.49	7	0.34	0.99
Polyolefins	0	0.00	8	0.40	0.85
Home & Automotive	1	0.44	11	0.54	0.96
Eth. Oxide Der.	0	0.00	2	0.66	0.40
Specialty Chemicals	0	0.00	6	0.71	0.93
Hydrocarbons	0	0.00	1	0.72	1.07
Films-Packaging	1	0.43	15	0.75	1.39
Sil. & Urethane In.	1	0.51	14	0.78	1.02
Spec. Poly. & Comp.	0	0.00	6	0.90	1.10
Battery Products	5	0.98	41	0.95	1.00
Solv. & Coat. Mat.	6	2.57	22	0.97	0.92
ESD & CPD	2	0.64	25	0.97	1.10
Eng. & Tech. Services	2	0.84	24	1.02	0.94
TOT. DOMESTIC LIMIT					1.05
Electronics	2	0.38	43	1.07	0.94
U.C. Canada Ltd.	5	1.46	33	1.10	1.28
Linde	4	0.64	77	1.37	1.81
Agricultural Products	6	2.12	41	1.58	1.12
Engineering Prod.	6	2.72	37	1.88	2.24
Metals	2	1.74	35	3.60	2.80
SUBTOTAL DOMESTIC	44	0.88	453	1.03	
Nuclear	17	1.25	99	0.82	0.85
TOTAL DOMESTIC	61	0.96	552	0.98	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
Hydrocarbons	0	0.00	0	0.00	0.08	0.00
Polyolefins	0	0.00	0	0.00	0.09	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
Battery Products	0	0.00	1	0.02	0.04	0.00
General Departments	0	0.00	1	0.04	0.07	0.45
ESD & CPD	0	0.00	1	0.04	0.12	1.00
Home & Automotive	0	0.00	1	0.05	0.07	0.25
Engineering Prod.	0	0.00	1	0.05	0.12	0.51
Eth. Oxide/Glycol	0	0.00	1	0.05	0.14	3.21
Sil. & Urethane In.	1	0.51	1	0.06	0.16	0.50
Electronics	0	0.00	3	0.07	0.08	1.69
Solv. & Coat. Mat.	0	0.00	2(1)	0.09	0.12	3.18
TOT. DOMESTIC LIMIT					0.09	
U.C. Canada Ltd.	1	0.29	3	0.10	0.18	2.91
Specialty Chemicals	0	0.00	1	0.12	0.08	4.01
Linde	0	0.00	8	0.14	0.19	5.05
Spec. Poly. & Comp.	0	0.00	1	0.15	0.10	1.65
Eng. & Tech. Services	1	0.42	4	0.17	0.07	7.87
Agricultural Prod.	0	0.00	6	0.23	0.14	3.93
Metals	1	0.87	6	0.62	0.28	23.12
SUBTOTAL DOMESTIC	4	0.08	41(1)	0.09		2.72
Nuclear	0	0.00	7	0.06	0.03	2.47
TOTAL DOMESTIC	4	0.06	48(1)	0.09	0.09	2.66

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet

MAR. U.C. So Africa-Crushed by elevator

JUNE U.C. Pan America-Buried in ore silo

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
U.C. Pan America	3	0.21	48	0.35	0.74
U.C. Europe	4	0.62	24	0.42	0.42
U.C. Africa Mid-East	0	0.00	9	0.48	0.80
U.C. Eastern	12	0.63	91	0.53	0.80
U.C. So. Africa	12	1.64	59	0.90	1.78
TOTAL INTERNATIONAL	31	0.63	231	0.52	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT	SEV.
U.C. Europe	0	0.00	1	0.02	0.06	0.97
U.C. Pan America	0	0.00	9(1)	0.07	0.10	3.53
U.C. Eastern	4	0.21	24	0.14	0.26	1.73
U.C. So. Africa	5	0.68	20(1)	0.30	0.27	5.04
U.C. Africa Mid-East	0	0.00	8	0.43	0.48	2.26
TOTAL INTERNATIONAL	9	0.18	62(2)	0.14	0.19	2.69

RECORDABLE INJURIES - ALL UCC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
TOTAL UCC	92	0.81	783	0.78	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT	SEV.
TOTAL UCC	13	0.12	110(3)	0.11	0.14	2.68

*Fatalities shown in ( )

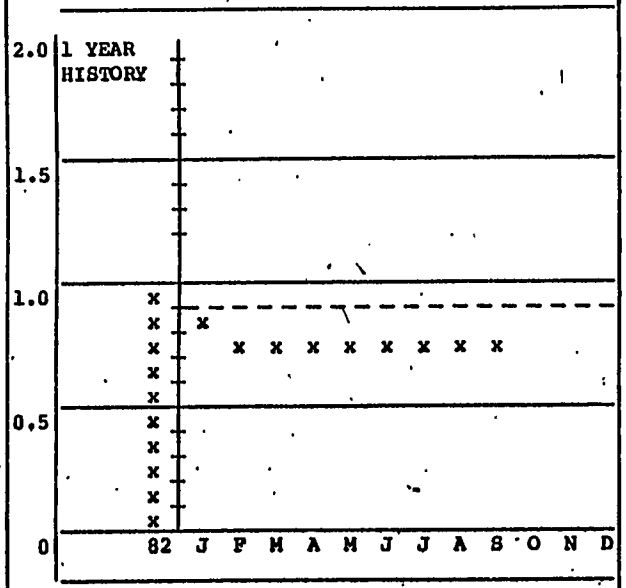
COMMENTS:

Worldwide 1983 safety performance continues better in all categories than that for the first nine months of 1982. We have had 54 fewer injuries with days away from work and 250 fewer recordable injuries in 1983.

Accidental property loss totals are only 45% of what they were after nine months in 1982.

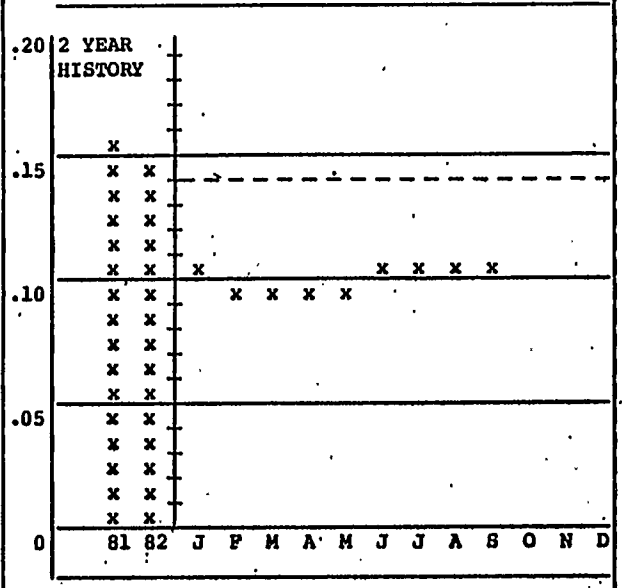
C. E. ELEY

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	34
Polyolefins	47
U.C. Pan America	47
U.C. So. Africa	51
Films-Packaging	54
Home & Automotive	56
U.C. Africa Mid-East	60
U.C. Eastern	66
Hydrocarbons	67
Linde	76
Silicones & Urethane Inter.	76
Specialty Chemicals	76
Specialty Polymers & Composites	82
Engineering Products	84
U.C. Canada Ltd.	86
ESD & CPD	88
Battery Products	95
Nuclear	96
U.C. Europe	100
Solvents & Coatings Materials	105
Eng. & Tech. Services	109
Electronics	114
Metals	129
General Departments	133
Agricultural Products	141
Ethylene Oxide Derivatives	165

INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Films-Packaging	0
Hydrocarbons	0
Medical Products	0
Polyolefins	0
ESD & CPD	33
U.C. Europe	33
Ethylene Oxide/Glycol	36
Silicones & Urethane Inter.	38
Engineering Products	42
Battery Products	50
U.C. Eastern	54
U.C. Canada Ltd.	56
General Departments	57
U.C. Pan America	70
Home & Automotive	71
Linde	74
Solvents & Coatings Materials	75
Electronics	88
U.C. Africa Mid-East	90
U.C. So. Africa	111
Specialty Chemicals	150
Specialty Polymers & Composites	150
Agricultural Products	164
Nuclear	200
Metals	221
Eng. & Tech. Services	243

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	LIMIT	FATALITIES
Medical Products	0	0.00	8.70	
Polyolefins	8	1.41	4.16	
Electronics	23	1.59	2.67	
General Departments	15	1.69	4.61	
Eth. Oxide Der.	2	1.74	3.20	
Hydrocarbons	1	2.00	8.01	
Nuclear	141	2.83	2.52	2
Eth. Oxide/Glycol	29	3.94	6.40	
Spec. Poly. & Comp.	11	4.53	5.50	
TOT. DOMESTIC LIMIT			5.40	
Linde	120	5.78	5.90	
Battery Products	103	5.95	8.00	2
Agricultural Products	55	6.08	5.90	
Specialty Chem.	19	6.10	6.00	
ESD & CPD	61	6.32	9.18	
Home & Automotive	52	6.60	6.12	
Films-Packaging	52	6.99	10.00	
Metals	26	7.24	7.00	
Sil. & Urethane Inter	48	7.33	9.00	1
U.C. Canada Ltd.	96	8.12	8.55	
Solvents & Coat. Mat.	76	9.20	3.94	
Eng. & Tech. Services	86	9.90	7.36	
Engineering Prod.	74	10.09	6.00	1
TOTAL DOMESTIC	1098	5.18	5.40	6

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	107	200
Battery Products	0	0	0
ESD & CPD	0	55	240
Electronics	0	69	0
Eng. & Tech. Services	0	0	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Hydrocarbons	0	18	0
Linde	200	475	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	0	110	0
Polyolefins	0	8	200
Sil. & Urethane Inter	0	67	100
Solvents & Coat. Mat.	0	0	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	20	20	500
U.C. Eastern	0	0	0
U.C. Europe	0	32	0
U.C. Pan America	20	20	300
U.C. So. Africa	0	95	0
TOTAL UCC	240	1322	4363

Distribution:

H. H. Abee

R. C. Baker/H. G. Coltharp
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
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C. E. Johnson
C. G. Jones
M. L. Jones

E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal

M. Sanders
J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
D. B. Trauger
C. W. Turok/R. H. Rucker, M.D.

C. W. Weber
J. C. White
R. D. Williams
R. D. Worrell

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Cl^-, Ammonia, *	10	96
ORGDP	None	0	100
Y-12	None	0	100
PGDP	None	0	100

*Sewage Treatment Plant by-pass due to equipment malfunction

2. Compliance Evaluation Report from State Inspection - ORNL

ORNL received its compliance evaluation inspection report from the State. This evaluation report was a result of the compliance inspection of August 23, 1983. A response to this report was prepared by the DEM staff and forwarded to DOE.

3. ORNL Facilities at Y-12 Drainage Systems - ORNL

The final report was received from Lockwood-Greene on the drainage survey for ORNL buildings located at the Y-12 Plant. This survey included inspection of all entries to and routings of the sanitary and process drainage systems, identification of any cross-connections between these systems, and reports of any unusual conditions.

4. Perimeter Air Monitoring Stations Equipment - ORNL

Bids have been reviewed and a vendor has been selected to purchase equipment for the perimeter air monitoring stations.

5. PCB Transformer Shipment - ORGDP

Tuesday, November 15, 1983, 13 PCB transformers (drained and flushed) were transported by Chemical Waste Management, Inc., to their disposal site in Emelle, Alabama. The transformers will be buried in an EPA approved landfill.

6. DOE Appraisal - ORGDP

The annual DOE appraisal of the ORGDP Environmental Management Program was conducted on November 28, 29, 30, and December 2, 1983. The appraisal team consisted of the DOE Environmental Protection Branch Acting Chief, H. W. Hibbitts and four of his

staff members--S. L. LeStrange, S. S. Stief, R. C. Sleeman, and M. A. Travaglini--and L. Whitaker of the Office of Operations and Facility Reliability in Germantown. The primary areas of concern and discussion included liquid and airborne effluent monitoring programs, PCB management programs, Resource Conservation and Recovery Act (RCRA) compliance programs, methods and effectiveness of in-plant communications, and groundwater monitoring.

Facilities toured by the appraisal team included the K-402-9 purge cascade scrubber, the K-1025-C hazardous waste storage facility, several outside oil and chemical storage tanks, the radioactive scrap metal storage area, the central control facility, NPDES locations, production facilities, K-1421 incinerator, meterological tower, K-1232, and the new waste oil storage facility.

In general, the DOE personnel seemed to be very well pleased with the ORGDP program. The formal appraisal critique will be held December 14, 1983.

7. Summary of November Activities - Y-12

During the month of November, three documents were delivered to DOE in accordance with the Memorandum of Understanding (MOU) agreement between DOE, EPA, and the TDHE. Titles and dates of transmittal are as follows:

October 31, 1983 - "Characterization and Remedial Action Plan for the Y-12 Plant"

October 31, 1983 - "Scheduling for Terminating Use of Y-12 Burial Grounds in Bear Creek Valley"

November 9, 1983 - "Design Specifications and Operating Procedures for Y-12 Centralized Sanitary Landfill II"

In the area of air pollution, an application was submitted for modification of the current permit for the M-Wing Machine Shop in Building 9215.

8. Tours and Briefings - Y-12

On November 9, the DOE Contractors Ad Hoc Low Level Waste Managers Meeting was held in Knoxville and the group was given a general tour of the waste disposal facilities at Y-12.

On November 10, Paul Kaspar, the new DOE Assistant Manager of Safety and Environment, toured major facilities affected by TDHE actions and agreements.

On November 18, the Department of Justice attorneys representing DOE in the lawsuit with the Legal Environmental Assistance Foundation (LEAF) visited the Y-12 Plant.

9. Gasoline Spill - PGDP

A spill of approximately five gallons of gasoline occurred in November when a hose nozzle which was hanging outside the tank dike fell to the ground. To eliminate the potential fire hazard, the gasoline that had not evaporated was flushed to a storm drain where it could evaporate behind one of the inverted pipe dams. It was recommended that hoses be hung inside a diked area and that leaking nozzles be replaced.

INDUSTRIAL HYGIENE

1. Staff Training - ORNL

Mike Brooks of ORNL Industrial Hygiene Department recently attended the toxicology short course given at the Los Alamos Laboratory by the OSHA Training Institute.

2. Self-Audit - ORGDP

Audit questionnaires were distributed to 23 ORGDP supervisors and division managers who were requested to provide a candid evaluation of how the Industrial Hygiene Department rates with respect to professional expertise, overall communications, and adequacy and timeliness of response. Auditors were also asked what improvements could be made to provide a service that would better meet their needs.

Sixteen questionnaires (70%) were returned with several helpful comments. Although the overall ratings were favorable, areas were identified for emphasis in CY '84.

3. Implementation of Revised Guidelines for Cooling Tower Work - ORGDP

Based on recent discussion within UCC-ND, the following criteria were adopted.

1) Maintain routine treatment and monitoring of cooling towers for legionnaire's disease bacteria

2) A dust mask (minimum of 3M 8710 or equivalent) is required for working:

   - On an operating tower at all times

   - Around or inside towers with exposure to a mist, splash, or spray which can be seen or felt.

Implementation was accomplished by 1) meeting with division managers and supervisors initially and 2) providing training to supervisors and workers involved in cooling tower work. The guideline went into effect November 3, 1983.

4. Respirator Escape Units Evaluation Under Way - PGDP

An evaluation of 5-minute respirator escape units was initiated. One unit each was obtained from three companies and the capabilities of the units are being evaluated. Limitations of the devices will be studied as well as areas in the plant where they may be needed in emergency situations. Members of Plant Protection and Operations are part of the evaluation team.

5. PCB Air Sampling - PGDP

Air samples were taken during the removal of PCB-contaminated rock and soil from a C-611 transformer area. The air samples have not been analyzed but this type of sample typically has been 0.01 mg/m^3 or less.

7. Mercury Levels Continue Low in Building 81-10 Stripping Operation - Y-12

Airborne levels of mercury continue to be low during the stripping operation of the Mercury Recovery Facility, Building 81-10. These levels range from less than detectable to 0.03 mg/m^3 (Threshold Limit Value for mercury is 0.05 mg/m^3) with the exception of excursions during major process line removal. Half-face respirators are being worn during routine operations and fresh air masks are worn when welding and cutting is required. A reading of 1 mg/m^3 was recorded during a cutting operation; however, a fresh air mask was worn and the cut was made outside. Two daily walk-through surveys and 8-hour time-weighted-average personnel samples are conducted by Industrial Hygiene. All personnel are participating in the mercury urinalysis program, and the operation appears to be in good control.

CRITICALITY SAFETY

Annual Review of the Y-12 Plant Criticality Safety Program - Y-12

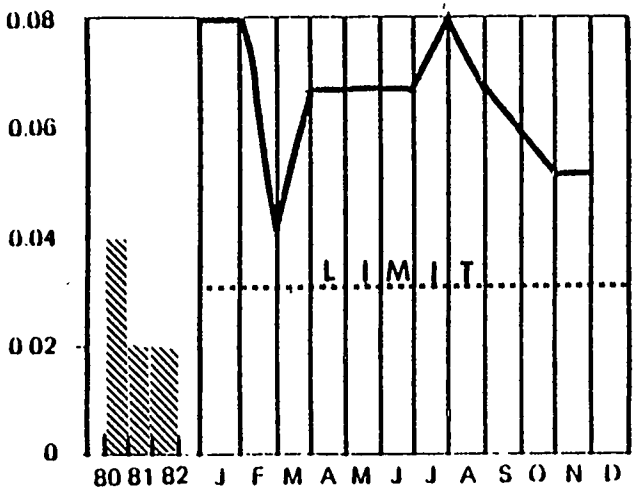
The Y-12 Plant Criticality Safety Committee has concluded their annual review of the Plant Criticality Safety Program. The Assembly, Development , Engineering, Fabrication, HSEA, Industrial Engineering, Maintenance, Metal Preparation, Product Certification, Quality, and SPPU Divisions were interviewed about their progress in training activities.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

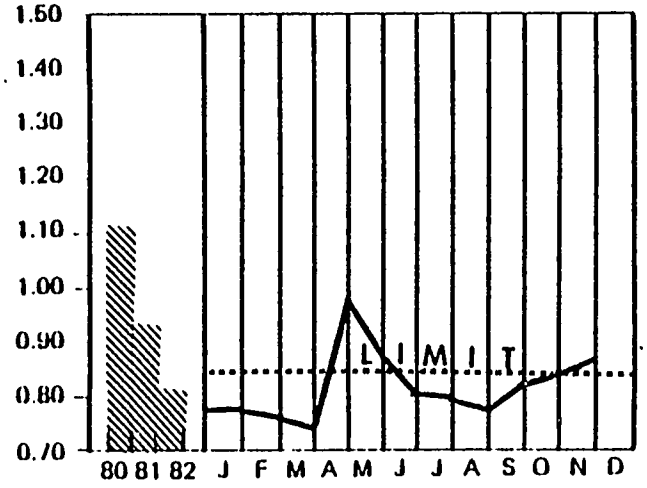
November 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.06		3	0.94	21	0.58		4	2.98	43	2.89	
ORNL	0	0.00	2	0.06		3	0.94	24	0.67		2	1.47	56	3.75	
OR Y-12	1	0.17	4	0.06		7	1.22	72	1.12		5	2.06	63	2.39	
PGDP	0	0.00	0	0.00		1	1.01	11	0.97		1	2.36	10	2.12	
UCC-ND	1	0.08	8	0.05	0.03	14	1.07	128	0.87	0.85	12	2.16	172	2.83	2.52

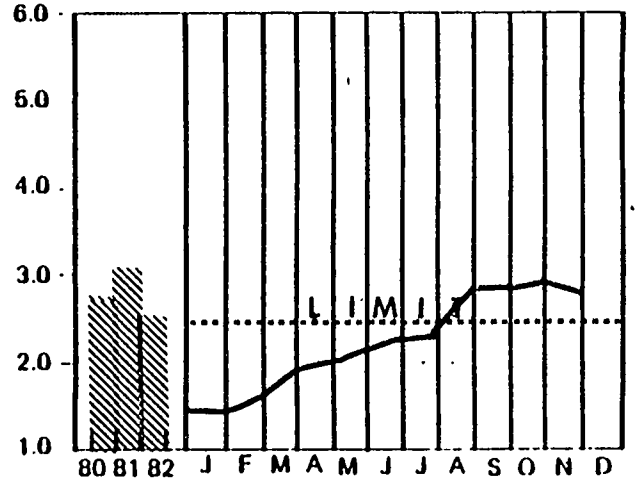
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE JOB DISABLING INJURY RATE



COMMENTS: A Y-12 employee suffered a Lost Workday Injury (thermal burns to the eyes) when an explosion occurred in a vacuum cleaner being used to remove sodium hydride from a reactor.

RGJordan:cj
12/16/83

UNION CARBIDE CORPORATION - SAFETY SUMMARY

OCTOBER 1983

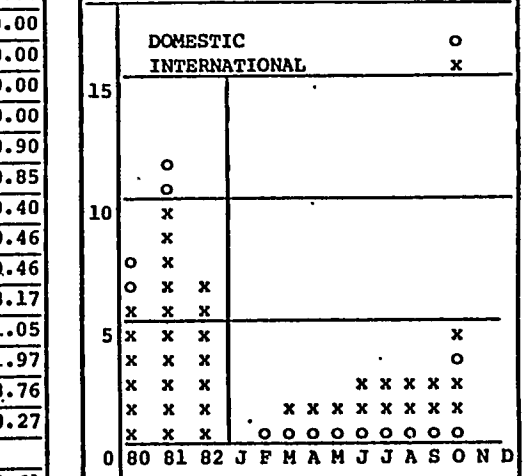
RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
Medical Products	0	0.00	0	0.00	4.90
General Departments	0	0.00	5	0.18	0.15
UNIPOL Systems	0	0.00	1	0.27	0.85
Eth. Oxide/Glycol	0	0.00	6	0.28	0.99
Polyolefins	1	0.56	9	0.42	0.85
Home & Automotive	2	0.87	13	0.58	0.96
Eth. Oxide Der.	0	0.00	2	0.59	0.40
Hydrocarbons	0	0.00	1	0.65	1.07
Specialty Chemicals	1	1.06	7	0.74	0.93
Spec. Poly. & Comp.	0	0.00	6	0.82	1.10
Sil. & Urethane In.	3	1.52	17	0.85	1.02
Films-Packaging	4	1.86	19	0.86	1.39
ESD & CPD	3	0.99	28	0.97	1.10
Electronics	2	0.40	45	1.00	0.94
Eng. & Tech. Services	2	0.97	26	1.01	1.07
Solv. & Coat. Mat.	3	1.44	26	1.05	0.92
U.C. Canada Ltd.	2	0.57	35	1.05	1.28
TOT. DOMESTIC LIMIT					1.05
Battery Products	10	2.01	51	1.06	1.00
Linde	8	1.10	85	1.34	1.81
Agricultural Products	2	0.73	43	1.50	1.12
Engineering Prod.	2	0.89	39	1.78	2.24
Metals	0	0.00	35	3.24	2.80
SUBTOTAL DOMESTIC	45	0.91	499	1.02	
Nuclear	13	0.95	112	0.83	0.85
TOTAL DOMESTIC	58	0.92	611	0.98	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	YTD LIMIT	YTD SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
UNIPOL Systems	0	0.00	0	0.00	0.05	0.00
Hydrocarbons	0	0.00	0	0.00	0.08	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
ESD & CPD	0	0.00	1	0.03	0.12	0.90
Battery Products	1	0.20	2	0.04	0.04	0.85
General Departments	0	0.00	1	0.04	0.07	0.40
Polyolefins	1	0.56	1	0.05	0.09	0.46
Engineering Prod.	0	0.00	1	0.05	0.12	0.46
Eth. Oxide/Glycol	0	0.00	1	0.05	0.14	3.17
Sil. & Urethane In.	0	0.00	1	0.05	0.16	1.05
Electronics	0	0.00	3	0.07	0.08	1.97
Solv. & Coat. Mat.	0	0.00	2(1)	0.08	0.12	3.76
Home & Automotive	1	0.44	2	0.09	0.07	0.27
TOT. DOMESTIC LIMIT					0.09	
Specialty Chemicals	0	0.00	1	0.11	0.08	3.61
U.C. Canada Ltd.	1	0.29	4	0.12	0.18	3.94
Spec. Poly. & Comp.	0	0.00	1	0.14	0.10	1.50
Linde	2(1)	0.28	10(1)	0.16	0.19	4.88
Eng. & Tech. Services	0	0.00	4	0.16	0.08	8.88
Agricultural Prod.	0	0.00	6	0.21	0.14	5.33
Metals	0	0.00	6	0.56	0.28	21.01
SUBTOTAL DOMESTIC	6(1)	0.12	47(2)	0.10		2.99
Nuclear	0	0.00	7	0.05	0.03	2.22
TOTAL DOMESTIC	6(1)	0.09	54(2)	0.09	0.09	2.82

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet

MAR. U.C. So Africa-Crushed by elevator

JUNE U.C. Pan America-Buried in ore silo

OCT. Linde - Suffocation with Nitrogen Gas

OCT. U.C. Eastern - Electrocution

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
U.C. Pan America	5	0.33	53	0.35	0.74
U.C. Africa Mid-East	0	0.00	9	0.43	0.80
U.C. Europe	5	0.77	29	0.46	0.42
U.C. Eastern	8	0.43	99	0.52	0.80
U.C. So. Africa	11	1.42	67	0.91	1.78
TOTAL INTERNATIONAL	29	0.58	257	0.52	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	YTD LIMIT	YTD SEV.
U.C. Europe	2	0.31	3	0.05	0.06	1.29
U.C. Pan America	1	0.07	10(1)	0.07	0.10	3.37
U.C. Eastern	2(1)	0.11	27(1)	0.14	0.26	1.85
U.C. So. Africa	3	0.39	22(1)	0.30	0.27	6.47
U.C. Africa Mid-East	0	0.00	8	0.38	0.48	2.02
TOTAL INTERNATIONAL	8(1)	0.16	70(3)	0.14	0.19	2.93

RECORDABLE INJURIES - ALL UCC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT
TOTAL UCC	87	0.77	868	0.77	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	YTD LIMIT	YTD SEV.
TOTAL UCC	14(2)	0.12	124(5)	0.11	0.14	2.87

*Fatalities shown in ( )

COMMENTS:

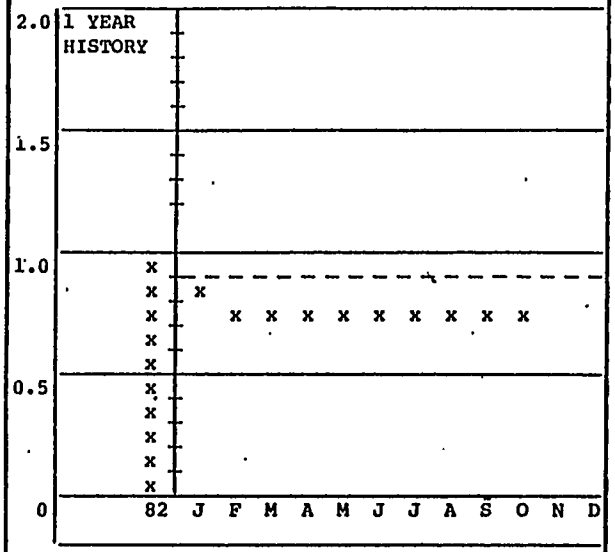
The Corporation experienced its fourth and fifth fatalities of the year in October.

C. E. Eley

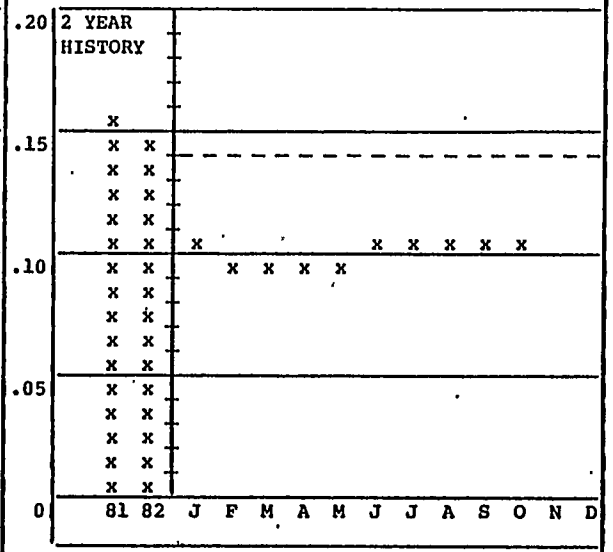
UNION CARBIDE CORPORATION SAFETY/LOSS CONTROL SUMMARY

OCTOBER 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	28
UNIPOL Systems	32
U.C. Pan America	47
Polyolefins	49
U.C. So. Africa	51
U.C. Africa Mid-East	54
Home & Automotive	60
Hydrocarbons	61
Films-Packaging	62
U.C. Eastern	65
Linde	74
Specialty Polymers & Composites	75
Engineering Products	79
Specialty Chemicals	80
U.C. Canada Ltd.	82
Silicones & Urethane Inter.	83
ESD & CPD	88
Nuclear	98
Battery Products	106
Electronics	106
Eng. & Tech. Services	107
U.C. Europe	110
Solvents & Coatings Materials	114
Metals	116
General Departments	120
Agricultural Products	134
Ethylene Oxide Derivatives	148

	% OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Films-Packaging	0
Hydrocarbons	0
Medical Products	0
UNIPOL Systems	0
ESD & CPD	25
Silicones & Urethane Inter.	31
Ethylene Oxide/Glycol	36
Engineering Products	42
U.C. Eastern	54
Polyolefins	56
General Departments	57
Solvents & Coatings Materials	67
U.C. Canada Ltd.	67
U.C. Pan America	70
U.C. Africa Mid-East	79
U.C. Europe	83
Linde	84
Electronics	88
Battery Products	100
U.C. So. Africa	111
Home & Automotive	129
Specialty Chemicals	138
Specialty Polymers & Composites	140
Agricultural Products	150
Nuclear	167
Metals	200
Eng. & Tech. Services	229

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	LIMIT	FATALITIES
UNIPOL Systems	0	0.00	4.16	
Medical Products	0	0.00	8.70	
Polyolefins	9	1.46	4.16	
Electronics	25	1.53	2.67	
General Departments	16	1.63	4.61	
Eth. Oxide Der.	3	2.36	3.20	
Nuclear	160	2.89	2.52	3
Hydrocarbons	2	3.60	8.01	
Spec. Poly. & Comp.	11	4.08	5.50	
Eth. Oxide/Glycol	34	4.22	6.40	
TOT. DOMESTIC LIMIT			5.40	
Linde	126	5.46	5.90	
Agricultural Products	58	5.77	5.90	
Specialty Chem.	21	6.07	6.00	
ESD & CPD	66	6.13	9.18	1
Battery Products	123.	6.37	8.00	2
Home & Automotive	56	6.38	6.12	
Films-Packaging	54	6.53	10.00	
Metals	27	6.74	7.00	
Sil. & Urethane Inter	57	7.85	9.00	1
U.C. Canada Ltd.	109	8.29	8.55	
Solvents & Coat. Mat.	86	9.51	3.94	
Engineering Prod.	78	9.56	6.00	1
Eng. & Tech. Services	95	10.02	8.01	1
TOTAL DOMESTIC	1214	5.13	5.40	9

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	179	200
Battery Products	0	0	0
ESD & CPD	9	64	240
Electronics	12	80	0
Eng. & Tech. Services	0	0	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Hydrocarbons	0	18	0
Linde	0	475	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	0	110	0
Polyolefins	7	15	200
Sil. & Urethane Inter	99	166	100
Solvents & Coat. Mat.	0	10	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	32	500
U.C. Eastern	0	0	0
U.C. Europe	0	32	0
U.C. Pan America	0	20	300
UNIPOL Systems	0	0	0
U.C. So. Africa	0	95	0
TOTAL UCC	127	1524	4363

Distribution:

H. H. Abee

R. C. Baker/H. G. Coltharp
J. A. Barker
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G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

J. M. Kennerly
E. Y. Kimmerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal

M. Sanders
J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
D. B. Trauger
C. W. Turok/R. H. Rucker, M.D.

C. W. Weber
J. C. White
R. D. Williams
R. D. Worrell

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC

ENVIRONMENTAL AFFAIRS

1. NPDES Compliance Experience

Plant	Parameters Out of Compliance	Number of Non-Compliances	Percentage of Total Measurements In Compliance
ORNL	Cl^-, Ammonia,	6	98
ORGDP	Cl^-	1	99
Y-12	None	0	100
PGDP	None	0	100

2. Hazardous Waste Shipment to CWM Site in Alabama - ORNL

On December 9, 80 drums of hazardous waste generated by ORNL facilities were shipped to Chemcial Waste Management's Alabama site for disposal.

3. Industrial Waste Landfill - ORNL

A tentative site for the new industrial waste landfill has been selected. Efforts to determine groundwater depths are under way.

4. State Inspection of Hazardous Waste Management Program - ORNL

During December, personnel from the state of Tennessee Solid Waste Division conducted an audit inspection of ORNL's Hazardous Waste Management Program. Everything was found to be in compliance.

5. Tour of Facilities - ORNL

On December 19, a tour of selected ORNL facilities was conducted for the Oak Ridge City Council, the Oak Ridge Environmental Quality Control Board, and press members for the Oak Ridger newspaper.

6. Y-12 Stack Sampling Program - ORNL

The Y-12 stack sampling program was begun. Data are presently being collected and processed.

7. UCC-ND and GAT Environmental Protection Seminar - ORNL

Several papers were presented by ORNL staff at the annual meeting.

8. Hazardous and Radioactive Mixed Wastes Management Plan - ORNL

DEM staff prepared and submitted Chapters 1, 2, and 7 of ORNL's Waste Management Plan as required by DOE Order 5480.2.

9. Computer Programs for Radiological Gaseous Discharges - ORNL

Computer runs using AIRDOS/DARTAB codes were completed to calculate population doses due to discharges from the three gaseous diffusion plants.

10. 1983 Environmental Protection Seminar - ORGDP

The Sixth Annual UCC-ND and GAT Environmental Protection Seminar was hosted by the ORGDP Environmental Management Department December 6, 7, and 8, 1983. There were approximately 100 attendees with an average attendance of 50 per session. Six areas of waste management activities were covered in 35 informative presentations. A new session was added this year concerning Resource Conservation and Recovery Act lead by T. P. A. Perry.

11. Contractor's Burial Ground - Test Augering - ORGDP

Glenn Pruitt, staff geologist for the State Division of Solid Waste Management, was consulted and assisted in test augering of the Contractor's Burial Ground December 12 and 13, 1983. Mr. Pruitt directed the selection of six core drilling locations and recorded test augering results. Jim Grimes, UCC-ND geologist, and Jim Stone, UCC-ND environmental engineer, were present during the test augering. No problems were discovered, and it is anticipated that planned use of the burial ground will be approved.

12. DOE Environmental Management Appraisal - ORGDP

On December 14, 1983, a critique of the DOE Environmental Management appraisal for the ORGDP was conducted. The Environmental Management Program was rated superior.

13. Oak Ridge City Council Tour - ORGDP

The Oak Ridge City Council, Environmental Quality Advisory Board, Oak Ridge City Staff, and The Oak Ridger (Richard Merritt) visited the Oak Ridge Gaseous Diffusion Plant December 19, 1983, in connection with a guest DOE tour of environmental facilities. Also present for the tour were P. W. Kaspar, DOE-ORO Assistant Manager for Safety and Environment; C. R. Richmond, UCC-ND Director of Health, Safety, and Environmental Affairs; and C. G. Jones, UCC-ND Health, Safety, and Environmental Affairs.

14. PCB Shipment - ORGDP

Rollins Environmental Services of Deer Park, Texas, picked up 31 drums of PCB waste from K-726. The truck departed ORGDP December 20, 1983, and arrived Deer Park December 21, 1983.

Traffic and Receiving checked manifests and truck before departure. Copies of all manifests, shipping orders, and weight tickets are kept on file in the Environmental Management Department.

15. Mineral Oil Spill - ORGDP

Thursday, December 22, 1983, at approximately 9:30 a.m., while Quadrex was loading insulators (class 7 waste) on a truck at the contaminated scrap metal yard, an insulator broke open. The insulator contained approximately 12 gallons of mineral oil (containing 200 ppm PCB). The spill and truck were cleaned up with sorbal. Drums of sorbal and waste were stored at building K-726. Appropriate action was taken and overseen by the Environmental Management Department.

16. RCRA Permitting - ORGDP

On December 20, 1983, representatives of DOE environmental and ORGDP environmental met with representatives of the Tennessee Department of Health and Environment and the Environmental Protection Agency. Discussion was held on the possible permitting of the TSCA incinerator and the 1981 Environmental Pollution Safety Modification line item as well as the existing Treatment, Storage, Disposal Facility for Hazardous Waste at the ORGDP. It was tentatively agreed that DOE would submit Part A and Part B, RCRA permit applications on the TSCA incinerator and the 1981 line item for technical review. Permit applications for the other facilities will also be submitted for information purposes.

17. Action Plan for Bear Creek Burial Grounds - Y-12

On November 30, a meeting was held to develop a plan for improvements to be made in the Bear Creek Burial Grounds. Activities were identified with emphasis on improvements in management of water contamination.

18. Spill Information - Y-12

On December 1, an acid spill was reported in the plating shop in Building 9401-2. The spill resulted from a leaking flange on the bottom side of a 500-gallon acid waste tank which contained approximately 200 gallons at the time of the incident.

Actions taken by Metal Prep and Environmental Monitoring personnel included placing caustic around the tank to neutralize the acid, taking samples for laboratory analysis, and monitoring the industrial ditch near Beta-2, adding lime as needed. pH readings taken at the source indicated levels of <2 and storm sewer levels of pH 4.

19. Tennessee Manufacturers Association Meeting, December 8, 1983, Nashville, TN

A meeting sponsored by the Tennessee Manufacturers Association giving a perspective of environmental issues in the State of Tennessee was attended by a member of the Environmental Affairs Department. The program was a briefing by State officials on issues involving air and water quality and hazardous and nonhazardous wastes management. A highlight of the meeting was a presentation on "New Enforcement Policy" by Dr. Michael Bruńer, Assistant Commissioner, Tennessee Department of Health and Environment. Individual discussions were held with Dr. Bruner and Paul Davis, head of the NPDES section, concerning issues specific to the Y-12 Plant.

20. City Council Tours - Y-12

At the December 5, 1983, City Council meeting, Paul W. Kaspar gave an updated presentation on the health and environmental issues. Specific emphasis was on Mercury

related studies and the TDHE Complaint and Order for Bear Creek Watershed. An invitation to the City Council members resulted in a December 19, 1983 tour of the Y-12 Waste Disposal areas, Steam Plant, and Upper East Fork Poplar Creek (UEFPC). In attendance at the tour were members of the Oak Ridge City Council, Environmental Quality Advisory Board (EQAB), Oak Ridge City Staff, and the local press.

21. Cooling Tower Pollution Control Actions - Y-12

An inspection of demolished cooling tower, 9409-3 by Environmental Affairs and Utilities resulted in the application of an asphalt cap to prevent rainfall from leaching contaminants to UEFPC. A liner and additional paving will be done in the spring.

22. MOU and Complaint and Order Highlights (through 12/21) - Y-12

On December 2, 1983, Tennessee Commissioner of Department of Health and Environment executed the second Complaint and Order (C&O) with the Department of Energy. This (C&O) deals mainly with past actions in the Bear Creek Watershed area including the relief which it seeks. All actions from the Memorandum of Understanding relative to the Bear Creek Watershed were specifically made a part of the C&O. Significant new requirements are as follows:

Item 1: Within 15 calendar days of the issuance of the NPDES permit for the ORGDP Treatment Facility; all disposals or additions of materials to the S-3 Ponds shall cease.

Item 3: DOE submit to TDHE a rehabilitation program for the removal of contaminated sediments in the upper reaches of Bear Creek by January 3, 1984.

Item 6: DOE shall submit to TDHE by July 1, 1984, a proposal for remedial action for the Bear Creek Watershed area.

On December 9, 1983, we delivered to the DOE the "Closure Plan for Rust Engineering Y-12 Spoil Area," for submittal for approval to the Tennessee Department of Health and Environment (TDHE).

On December 14, 1983, in accordance with the TDHE Complaint and Order we delivered to DOE National Pollution Discharge Elimination System (NPDES) permits for discharges from the Steam Plant and cooling towers. The submittal included effluent sampling proposals and proposals with implementation schedules for interim management of the Steam Plant, cooling towers, and all other process waste source discharges.

23. Air Permit - PGDP

A permit application requesting a permit from the Kentucky Division of Air Pollution Control (DAPC) to operate the air contaminant sources at the PGDP was submitted to the DOE in December. Once reviewed and approved by the DAPC, an operating permit specifying operating conditions and emission limits for 26 sources will be issued.

24. NPDES Permit Review - PGDP

A team from EPA Region IV and the Paducah Regional Office of Kentucky Natural Resources and Environmental Protection Cabinet visited the plant in December to dis-

cuss a Kentucky Pollutant Discharge Elimination System (KPDES) water discharge permit. The representatives were very complimentary of our environmental program, but new permit conditions will not be known until Kentucky Division of Water representatives from Frankfort visit the plant in the spring.

25. C-616 Water Spill - PGDP

A spill of approximately 15,000 gallons of partially treated recirculating cooling water blowdown occurred on the afternoon of December 31, 1983. The spill was caused when a frozen water line forced open a check valve coupling from the C-616 preneutralization tank. Water monitors on Big Bayou Creek did not detect any unusual changes.

INDUSTRIAL HYGIENE

1. New Staff Member - ORNL

Donna Slaughter has recently joined the Industrial Hygiene staff as a technician replacing Sharon Yoder.

2. Sampling for Cooling Tower Chemicals - ORGDP

A sampling program has been initiated to evaluate potential employee exposure to cooling tower treatment chemicals which are airborne in the tower mist. To date, sample results for pentachlorophenol have been below detectable limits; trace amounts of chromium have been detected and sulfuric acid has been measured in concentrations as high as 0.32 milligrams per cubic meter. The threshold limit value for sulfuric acid is 1.0 milligrams per cubic meter.

3. Noise Dosimeter Sampling Data Now Computerized - Y-12

The Industrial Hygiene Department now has the capability to enter sampling data from noise dosimeters directly to the computer. This will eliminate manual steps and transposition errors.

4. H-2 Machine Shop Survey Results - Y-12

Industrial Hygiene surveyed a construction job in the H-2 machine shop and found a high dust count, very high noise levels, and carbon monoxide levels from a bobcat (motor vehicle) just above the TLV. The recommendation on the safety work permit from both Health Physics and Industrial Hygiene specified respirators. Industrial Hygiene found many employees were not complying with the respirator or hearing protection recommendations. The contractor supervisor was immediately notified and corrective action taken.

5. Cleaner-Degreaser Concern - Y-12

Industrial Hygiene received complaints from employees in 9201-5W concerning excessive levels of eye and upper respiratory irritation during a machine cleaning operation. The cleaner-degreaser used in the operation was investigated by IH and found to contain 2-Butoxy Ethanol, a known irritant. The use of this material was stopped and a more suitable substitute for the job was recommended by IH.

6. Respirator Training Program - PGDP

During December, 47 people attended respirator training and fitting sessions. Training for respirator users will be updated and revised. Retraining will be on an annual basis.

7. Cafeteria Inspected - PGDP

The quarterly cafeteria inspection was conducted on December 30. Discrepancies noted in the previous inspection were corrected and no new discrepancies were noted during the inspection.

8. LDB Sampling Program - PGDP

Fourteen water samples were taken and analyzed for LDB during December. The sources were various sanitary water sites, raw influent, and treated effluent. All showed low levels of LDB (10^6 LDB/liter or less). The highest levels were from the Ohio River raw influent.

Frozen cooling tower drift in the form of icicles was analyzed for LDB. Preliminary results were very low, indicating that LDB in the air will be low. However, air samples will be taken to confirm the relationship.

9. Building C-337 Wipe Sampling Survey - PGDP

Wipe samples were taken in C-337, Unit 1 on cell housings and were analyzed for 28 elements and asbestos. No unusual elements or asbestos fibers were found in the samples. The housing tops were also monitored for surface and transferable radioactive contamination. The very low levels of uranium activity present no hazard to employees in or on the cell housings.

HEALTH PHYSICS

1. Mobile In Vivo Radiation Laboratory Information Update - Y-12

In Vivo analyses for employees of the Paducah Gaseous Diffusion Plant were completed using the Mobile In Vivo Radiation Laboratory. Exposure results for 111 employees were provided to the PGDP Health Physics group.

The MIVRL has now moved to National Lead of Ohio in Cincinnati, where it will remain until mid-January 1984.

The Y-12 In Vivo Monitoring Laboratory utilizes a realistic phantom developed by Lawrence Livermore Laboratories for system calibration. The realistic phantom is constructed in human dimensions from tissue-equivalent materials, and it has a complete set of internal organs. Lungs with varying amounts of enriched uranium are used with the Y-12 phantom.

We have arranged to receive an additional set of lungs for the realistic phantom on loan from Exxon Nuclear as part of an In Vivo intercomparison study. These lungs contain 3% enriched uranium--different than that available in our own set of lungs. Besides providing information for comparing our system with those of other facili-

2. Uranium Exhaust Filter Fire - Y-12

Urine samples were collected from three Metal Preparation Division personnel involved in a depleted uranium exhaust filter fire on December 13, 1983, in Building 9201-5N Electroplating). Results indicate insignificant amounts of internal uranium exposure for the three employees.

3. Fire in Exhaust Duct in the Headhouse Basement of Building 9212 - Y-12

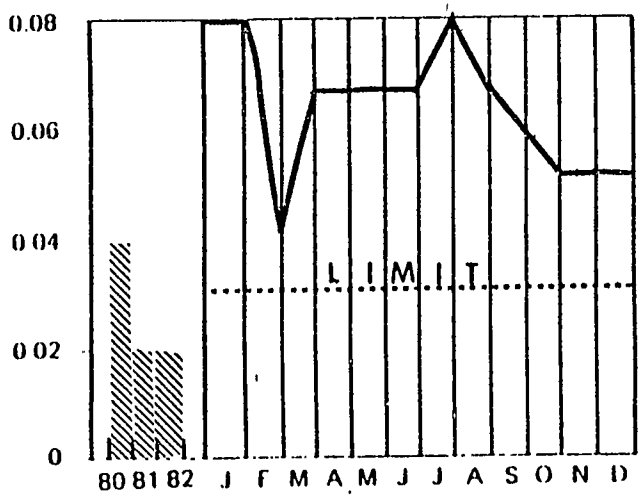
On Novmber 23, at approximately 11:25 a.m., an exhaust duct in the headhouse basement of Building 9212 caught fire. An investigation revealed the fire started after a painter, working in Room 35, accidentally dropped a lighted cigarette through a floor vent. All of the smoke was contained in the basement area. There were no employees working in the basement area at the time of the fire. Personnel were permitted to enter the basement area at 12:05 p.m. after acceptable high-volume air sample results were obtained.

UNION CARBIDE CORPORATION NUCLEAR DIVISION
HEALTH, SAFETY, AND ENVIRONMENTAL AFFAIRS REPORT

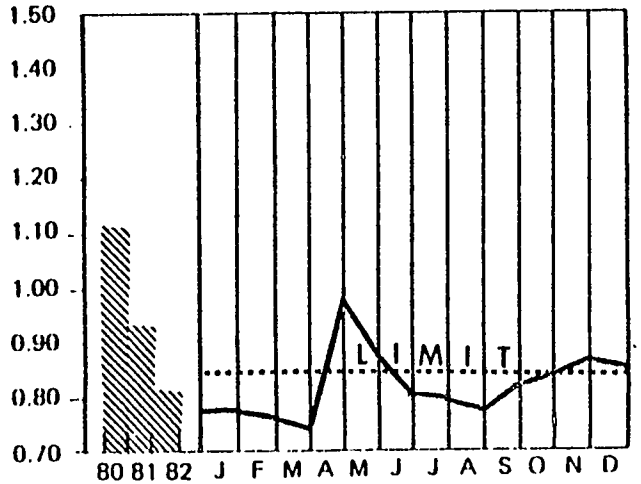
December 1983

	LOST WORKDAY CASES					RECORDABLE INJURIES/ILLNESSES					OFF-THE-JOB DISABLING INJURIES				
	MONTH		YTD			MONTH		YTD			MONTH		YTD		
	NO.	LWCIR	NO.	LWCIR	LIMIT	NO.	RIIR	NO.	RIIR	LIMIT	NO.	DIFR	NO.	DIFR	LIMIT
ORGDP	0	0.00	2	0.05		0	0.00	24	0.61		7	5.23	50	3.08	
ORNL	0	0.00	2	0.05		1	0.34	25	0.64		6	4.42	62	3.80	
OR Y-12	0	0.00	4	0.06		3	0.53	76	1.09		5	2.05	68	2.36	
PGDP	0	0.00	0	0.00		1	1.02	12	0.97		5	11.87	15	2.92	
UCC-ND	0	0.00	8	0.05	0.03	6	0.47	137	0.86	0.85	23	4.14	195	2.94	2.52

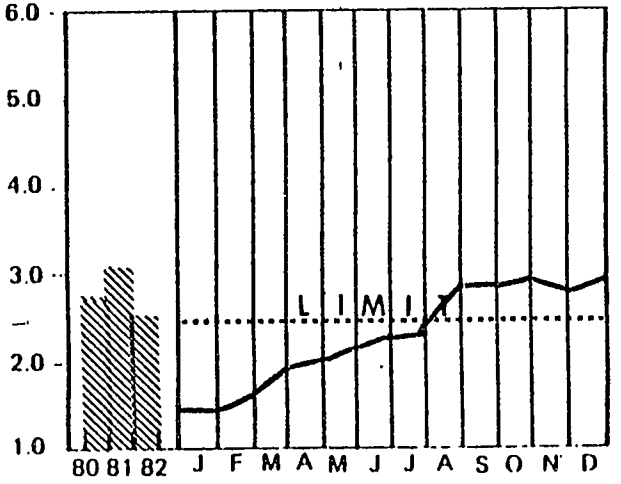
LOST WORKDAY CASE INCIDENCE RATE



RECORDABLE INJURY/ILLNESS RATE



OFF-THE JOB DISABLING INJURY RATE



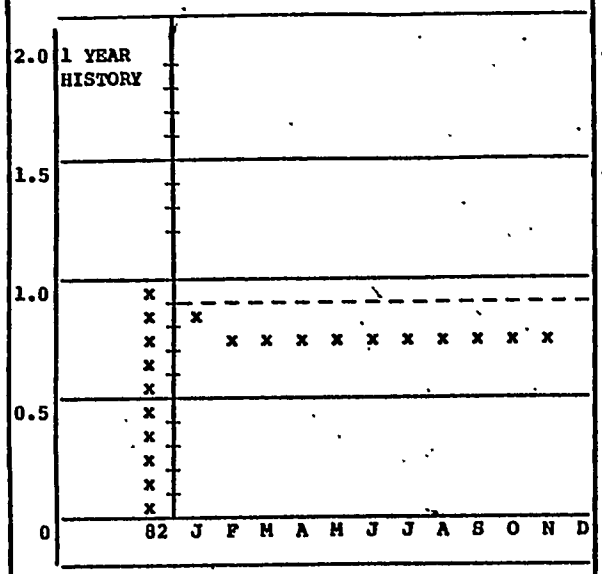
COMMENTS: Although our safety goals for 1983 were not achieved, the indices do compare favorably with other organizations doing similar work. We now have the opportunity to work toward new goals established for 1984. They are as follows: LWCIR - 0.04 or less RIIR - 0.84 or less OTJ DIFR - 2.43 or less.

RGJordan:cj
1/19/84

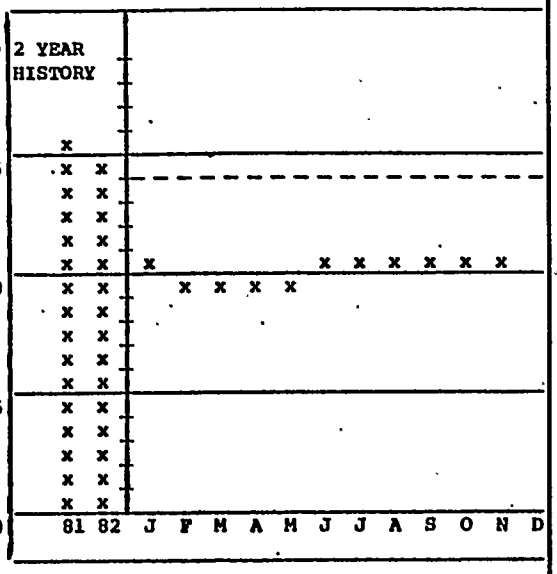
UNION CARBIDE CORPORATION SAFETY/LOSS SUMMARY

NOVEMBER 1983

RECORDABLE INJURIES
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



INJURIES WITH DAYS AWAY FROM WORK
YTD RATE FOR ALL UCC (- - - SHOWS UCC LIMIT)



	% OF COMPONENT LIMIT
Medical Products	0
Ethylene Oxide/Glycol	24
Polyolefins	45
U.C. Pan America	49
U.C. Africa Mid-East	50
U.C. So. Africa	51
Hydrocarbons	54
Home & Automotive	55
UNIPOL Systems	58
Films-Packaging	63
U.C. Eastern	65
Specialty Chemicals	73
Engineering Products	74
Linde	76
Silicones & Urethane Inter.	85
U.C. Canada Ltd.	87
ESD & CPD	88
Nuclear	100
Battery Products	102
Electronics	104
Metals	109
Eng. & Tech. Services	111
General Departments	113
Solvents & Coatings Materials	113
Specialty Polymers & Composites	114
U.C. Europe	117
Agricultural Products	134
Ethylene Oxide Derivatives	135

	% OF COMPONENT LIMIT
Ethylene Oxide Derivatives	0
Films-Packaging	0
Hydrocarbons	0
Medical Products	0
UNIPOL Systems	0
Ethylene Oxide/Glycol	29
Silicones & Urethane Inter.	31
Engineering Products	33
General Departments	43
Polyolefins	44
U.C. Eastern	46
ESD & CPD	50
Solvents & Coatings Materials	58
U.C. Pan America	60
U.C. Africa Mid-East	73
Electronics	75
Linde	84
U.C. Canada Ltd.	89
Battery Products	100
U.C. Europe	100
U.C. So. Africa	104
Home & Automotive	114
Specialty Chemicals	125
Agricultural Products	157
Nuclear	167
Eng. & Tech. Services	175
Metals	182
Specialty Polymers & Composites	250

OFF THE JOB DISABLING INJURIES

COMPONENT	YTD NO.	YTD DIFR.	LIMIT	FATALITIES
Medical Products	0	0.00	8.70	
UNIPOL Systems	2	1.38	4.16	
General Departments	16	1.49	4.61	
Electronics	28	1.54	2.67	
Polyolefins	13	1.95	4.16	
Eth. Oxide Der.	3	2.13	3.20	
Nuclear	172	2.83	2.52	3
Hydrocarbons	2	3.28	8.01	
Eth. Oxide/Glycol	35	3.99	6.40	1
Spec. Poly. & Comp.	13	4.40	5.50	
TOT. DOMESTIC LIMIT			5.40	
Agricultural Products	60	5.45	5.90	
Linde	141	5.57	5.90	
Specialty Chem.	22	5.78	6.00	
Home & Automotive	58	6.01	6.12	
ESD & CPD	73	6.16	9.18	1
Films-Packaging	57	6.27	10.00	
Metals	28	6.36	7.00	
Battery Products	134	6.37	8.00	2
Sil. & Urethane Inter	63	7.56	9.00	1
U.C. Canada Ltd.	121	8.37	8.55	
Engineering Prod.	80	8.91	6.00	1
Solvents & Coat. Mat.	90	9.16	3.94	
Eng. & Tech. Services	102	9.94	8.01	1
TOTAL DOMESTIC	1313	5.05	5.40	10

ACCIDENTAL PROPERTY LOSS ($000)

COMPONENT	MONTH	YTD	LIMIT
Agricultural Products	0	179	200
Battery Products	0	0	0
ESD & CPD	8	72	240
Electronics	0	80	0
Eng. & Tech. Services	0	0	0
Engineering Prod.	0	0	48
Eth. Oxide Der.	0	0	0
Eth. Oxide/Glycol	0	102	196
Films-Packaging	0	0	100
General Departments	0	75	0
Home & Automotive	0	25	0
Hydrocarbons	0	18	0
Linde	0	475	884
Medical Products	0	0	0
Metals	0	44	65
Nuclear	0	110	0
Polyolefins	0	15	200
Sil. & Urethane Inter	0	166	100
Solvents & Coat. Mat.	0	10	1450
Specialty Chem.	0	0	70
Spec. Poly. & Comp.	0	0	10
U.C. Africa Mid-East	0	0	0
U.C. Canada Ltd.	0	32	500
U.C. Eastern	0	0	0
U.C. Europe	100	132	0
U.C. Pan America	0	20	300
U.C. So. Africa	0	95	0
UNIPOL Systems	0	0	0
TOTAL UCC	108	1650	4363

RECORDABLE INJURIES - DOMESTIC

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
Medical Products	0	0.00	0	0.00	4.90
General Departments	0	0.00	5	0.17	0.15
Eth. Oxide/Glycol	0	0.00	6	0.24	0.99
Polyolefins	0	0.00	9	0.38	0.85
UNIPOL Systems	1	2.71	2	0.49	0.85
Home & Automotive	0	0.00	13	0.53	0.96
Eth. Oxide Der.	0	0.00	2	0.54	0.40
Hydrocarbons	0	0.00	1	0.58	1.07
Specialty Chemicals	0	0.00	7	0.68	0.93
Sil. & Urethane In.	2	0.60	19	0.87	1.02
Films-Packaging	2	0.95	21	0.87	1.39
ESD & CPD	3	1.03	31	0.97	1.10
Electronics	4	0.80	49	0.98	0.94
Battery Products	2	0.39	54	1.02	1.00
Solv. & Coat. Mat.	2	0.88	28	1.04	0.92
Eng. & Tech. Services	3	1.43	29	1.04	1.07
TOT. DOMESTIC LIMIT					1.05
U.C. Canada Ltd.	6	1.71	41	1.11	1.28
Spec. Poly. & Comp.	4	5.95	10	1.25	1.10
Linde	9	1.75	94	1.37	1.81
Agricultural Products	4	1.50	47	1.50	1.12
Engineering Prod.	1	0.45	40	1.66	2.24
Metals	1	0.98	36	3.04	2.80
SUBTOTAL DOMESTIC	44	0.91	544	1.01	
Nuclear	14	1.07	126	0.85	0.85
TOTAL DOMESTIC	58	0.94	670	0.97	1.05

INJURIES WITH DAYS AWAY FROM WORK - DOMESTIC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
Eth. Oxide Der.	0	0.00	0	0.00	0.00	0.00
Medical Products	0	0.00	0	0.00	0.00	0.00
UNIPOL Systems	0	0.00	0	0.00	0.05	0.00
Hydrocarbons	0	0.00	0	0.00	0.08	0.00
Films-Packaging	0	0.00	0	0.00	0.11	0.00
General Departments	0	0.00	1	0.03	0.07	0.37
Battery Products	0	0.00	2	0.04	0.04	0.77
Polyolefins	0	0.00	1	0.04	0.09	1.37
Engineering Prod.	0	0.00	1	0.04	0.12	0.41
Eth. Oxide/Glycol	0	0.00	1	0.04	0.14	2.66
Sil. & Urethane In.	0	0.00	1	0.05	0.16	2.29
Electronics	0	0.00	3	0.06	0.08	2.01
ESD & CPD	1	0.34	2	0.06	0.12	1.10
Solv. & Coat. Mat.	0	0.00	2(1)	0.07	0.12	4.32
Home & Automotive	0	0.00	2	0.08	0.07	0.61
TOT. DOMESTIC LIMIT					0.09	
Specialty Chemicals	0	0.00	1	0.10	0.08	3.28
Eng. & Tech. Services	0	0.00	4	0.14	0.08	9.65
U.C. Canada Ltd.	2	0.57	6	0.16	0.18	4.81
Linde	1	0.19	11(1)	0.16	0.19	4.85
Agricultural Prod.	1	0.37	7	0.22	0.14	6.15
Spec. Poly. & Comp.	1	1.49	2	0.25	0.10	1.62
Metals	0	0.00	6	0.51	0.28	22.66
SUBTOTAL DOMESTIC	6	0.12	53(2)	0.10		3.27
Nuclear	1	0.08	8	0.05	0.03	2.07
TOTAL DOMESTIC	7	0.11	61(2)	0.09	0.09	3.01

RECORDABLE INJURIES - INTERNATIONAL

COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
U.C. Pan America	7	0.48	60	0.36	0.74
U.C. Africa Mid-East	0	0.00	9	0.40	0.80
U.C. Europe	5	0.76	34	0.49	0.42
U.C. Eastern	10	0.52	109	0.52	0.80
U.C. So. Africa	5	0.70	72	0.91	1.78
TOTAL INTERNATIONAL	27	0.95	284	0.52	0.87

INJURIES WITH DAYS AWAY FROM WORK - INTERNATIONAL

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.*	YTD RATE	LIMIT	SEV.
U.C. Europe	1(1)	0.15	4(1)	0.06	0.06	1.16
U.C. Pan America	0	0.00	10(1)	0.06	0.10	3.21
U.C. Eastern	0	0.00	26(1)	0.12	0.26	1.78
U.C. So. Africa	0	0.00	22(1)	0.28	0.27	6.02
U.C. Africa Mid-East	0	0.00	8	0.35	0.48	1.86
TOTAL INTERNATIONAL	1(1)	0.02	70(4)	0.13	0.19	2.76

RECORDABLE INJURIES - ALL UCC

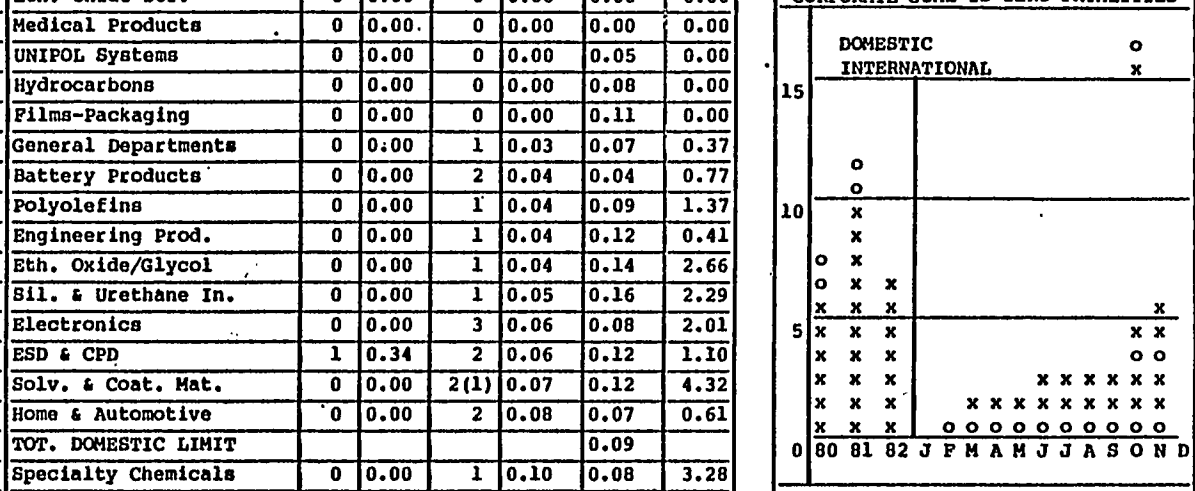
COMPONENT	MONTH NO.	MONTH RATE	YTD NO.	YTD RATE	LIMIT
TOTAL UCC	85	0.77	954	0.77	1.00

INJURIES WITH DAYS AWAY FROM WORK - ALL UCC

COMPONENT	MONTH NO.*	MONTH RATE	YTD NO.	YTD RATE	LIMIT	SEV.
TOTAL UCC	8(1)	0.07	131(6)	0.11	0.14	2.90

*Fatalities shown in ( )

NUMBER OF FATALITIES - YTD
TOTAL CORPORATION
CORPORATE GOAL IS ZERO FATALITIES



COMPONENT/CAUSE OF FATALITY

FEB. Solv.&Coat.Mat.-Fall from 40 feet
MAR. U.C. So Africa-Crushed by elevator
JUNE U.C. Pan America-Buried in ore silo
OCT. Linde - Suffocation with Nitrogen Gas
OCT. U.C. Eastern - Electrocution
NOV. U.C. Europe - Fall from truck

COMMENTS:

The Corporation experienced its sixth fatality of the year when an employee fell from a truck in Spain.

The November UCC total of eight injuries with days away from work was the lowest one month total this year.

C. E. Eley

Distribution:

H. H. Abee

R. C. Baker/H. G. Coltharp
J. A. Barker
G. L. Bean
J. T. Bradbury
T. R. Butz

H. P. Carter
R. W. Cope
L. M. Cuddy
J. M. Cwikla/J. D. Nicol

J. R. DeMonbrun
J. K. Denton
D. T. Duncan

A. K. Edwards/W. E. Thompson

G. G. Fee
D. E. Ferguson

A. S. Garrett, Jr., M.D.
W. R. Golliher
C. A. Grametbauer

R. F. Hibbs
C. C. Hopkins
G. W. Horde

G. R. Jasny
C. E. Johnson
C. G. Jones
M. L. Jones

J. M. Kennerly
M. W. Knazovich

L. W. Long

G. B. Marrow
J. R. Merriman
R. W. Morrow

J. M. Napier

T. W. Oakes

J. A. Parsons
D. C. Parzyck
F. S. Patton
J. E. Phillips, M.D.
W. E. Porter
H. Postma

C. R. Richmond
M. W. Rosenthal

J. D. Sherrod
K. W. Sommerfeld
I. G. Speas
L. H. Stinton

W. F. Thomas
D. B. Trauger
C. W. Turok/R. H. Rucker, M.D.

C. W. Weber
J. C. White
R. D. Williams
D. F. Woodring
R. D. Worrell

G. F. Zanolli, M.D.
C. D. Zerby
A. Zucker

UCC General Safety Committee
(Safety Section only)

File - RGJ - NoRC